

TECHNOLOGY FOR SOCIAL INCLUSION: TELLING VIRTUAL STORIES

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ABSTRACT

The shift in the communication landscape to incorporate multimodal methods of delivery in the teaching and learning of English is making its presence felt in South African higher education spheres, and learners are constructing identities, and negotiating meaning in online spaces. Rather than perpetuate the divide in developing countries, this paper argues for the use of technology for social inclusion, and reports on a parallel medium Internet Literacy course, the aim of which is to show how the only a blind participant among a group of sighted participants perceived the course. Included is a discussion of how she constructed identities and negotiated meaning in the course. The construction of identity is presented from Stephen Hall's (1999) and Norton (Pierce's) (1995,1997, 2000) views of how people understand their relationship in the world, how that relationship is constructed across time and space, and how people understand their possibilities for the future. Identity is presented from a post-modern perspective, as fragmented and decentred.

Introduction

The use of multi-media modes of delivery in the English classroom is still an emerging practice in developing countries such as South Africa. In is inevitable that the introduction of new modes is accompanied by teachers who are looking for new strategies to manage the change brought about by the new modes of delivery. Often resistance to such change is evident because of the degree of inadequacy and under-preparedness felt by many teachers (Snyder, 2002), as well as learners. The situation is exacerbated when technology is used as a teaching tool in a class attended by sighted and non-sighted learners.

South Africa higher education policy documents¹ recommend the implementation of information and communication technology (ICT) and resource-based education. However, there is quite often a mismatch between what is articulated in policy and in its

¹ Such as the Green Paper on Higher Education (1996), the White Paper on Education and Training (1994) and the Higher Education Act (1997)

practice, and the emergence of ICT in social, political, and educational spheres has therefore been met with some ambivalence in the country. On one hand the use of ICT is seen as making developing countries (such as South Africa) global players, while on the other, the lack of infrastructure and resources is seen to have a detrimental effect on global participation and development. However, it is the view of many, that to withhold from introducing technologies is to marginalise developing countries even further.

In this paper I discuss a second year Internet Literacy English course facilitated at a university in Johannesburg, South Africa. I examine ICT use in the context of South Africa as a developing country, where I present alternative arguments such as the more pressing needs than ICT. I go on to examine social inclusion, the digital divide, disability and the construction of identity from the perspective of a blind student.

Developing country context

Concerns relating to the use of ICT have been examined primarily against the backdrop of the developing-developed country disparity. It is shortsighted to think that what is appropriate in first world countries be adopted in its present condition in developing countries such as South Africa. Warschauer (2002; 2003) for instance cautions against common weaknesses in introducing ICT to developing countries, such as the use of overly sophisticated technology, and not training teachers and learners sufficiently in its use. Hence researchers such as Lelliott, Pendlebury and Enslin (2000) caution against locating Africa with developed nations when they say “In Africa and the rest of the developing world, patterns of inclusion and exclusion, empowerment and disempowerment have differed from those of Europe and North America” (2000:42).

Sketching the African and South African contexts: inclusion and connectivity

Much of the argument cautioning against the use of ICT in Africa is designed around the continent’s more pressing concerns: war, famine, poverty, and lack of basic education. Particularly apt are views such as the following:

...how can a woman be interested in Information and Communication Technologies (ICTs) on a hungry stomach with a child crying on her back for

food and another she is carrying in her arms dying because of lack of medical care? (Ochieng and Radloff, 1996 in Lelliott *et al*, 2000: 43).

Although the writers are forthright about such critical matters, which are relevant to any developing nation, they do support the use of ICT in promoting new opportunities for democracy in Africa, such as extending its use to women, providing education to geographically distant areas, and in disseminating health information.

The need for inclusion across the African continent is also articulated by South African President Thabo Mbeki, who speaks about the need to improve connectivity among people in Africa. He draws links between connectivity as a strategy for poverty reduction in NEPAD² (Chisholm, 2003). Lauglo *et al* support the President's view when they say it "is not *whether* computing skills need to be taught, but *how soon* it will be affordable and practicable to introduce such skills, and in what precise ways ICT can be most helpful in a school setting" (2003: 16 in Chisholm *et al*, 2004, my italics).

Currently, South Africa is considered the most technologically advanced country in Africa, with one million of the two million reported Internet users in Africa, being in South Africa (Lelliott *et al*, 2000). South Africa is also rated as having the highest number of domains and websites of the SADC countries: 187 649 domains and 3002 websites, compared with Angola, for instance, with 8 domains and 136 websites (in Chisholm *et al* 2004). However, although South Africa is considered a prominent player in the field of ICT in the SADC region, the country is a relatively minor player globally, hence research into the implementation of ICT in the classroom is valuable within its context as a developing country.

Policy documents relevant to higher education, for instance, expounds the need for an ICT approach and recommends the use of ICT to join the competitive global economic market, and the 'borderless' world of ICT is proposed as a route to global participation. Thus higher education is seen as playing a pivotal role in preparing youth for the knowledge and information society. Documents further suggest that one of the measures

² NEPAD – New Partnership for Africa's Development

that can be introduced to improve the efficiency of the higher education system, reduce unit costs and increase productivity is by introducing new teaching and learning strategies such as open and resource-based learning, which are less labour-intensive. The document proposes that that this would lead to significant changes to traditional modes of programme delivery and staff-student ratios (Section 5.3, Chapter 2, Green Paper on Higher Education, 1996).

Negotiating the digital divide for social inclusion

It is inevitable that limited access to, and lack of proficiency with ICT hampers the use of technology. Thus, the digital divide, or division between ‘haves’ and ‘have nots’ is particularly evident in developing countries. However, the notion is somewhat inaccurate because the stratification that exists in relation to access to online information has little to do with ICT, but rather more to do with political, economic, institutional, cultural, and linguistic contexts that shape meaning in people’s lives (Warschauer, 2002). Warschauer therefore considers the notion of the divide “simplistic” (2003: 297). He continues “A consideration of how people can use computers and the Internet to further the process of social inclusion is paramount in any effort to install new technology into an environment lacking in it” (2003: 44). Thus he sees the divide, or inequality as social, rather than digital. The notion concurs with Feenberg’s (1991) view that the shaping of technology is strongly related to issues of class and power, and not just issues of access. Thus, the view that the presence of technology necessarily influences social change is technologically deterministic (Feenberg, 1991; Warschauer, 2002; 2003). Warschauer illustrates this with his case study in Egypt where expensive hardware and software was purchased for educational purposes, but remained unused because of the failure to take into consideration the social environments necessary for computer laboratories to be utilised effectively (Warschauer, 2003).

Thus, the use of ICT can pose as both a threat and an opportunity to higher education. The threat appears in the form of widening the digital divide. Its opportunities take on the form of its implications for material and commercial power, where the higher-paid jobs will demand its use. Kennard (2001), for instance, says:

The issue of access to new technology will also determine the steps of every worker on each rung of the socioeconomic ladder. It is clear that in the next century, those who are literate in computer languages and familiar with new technologies will succeed, and those who are not, will not (Kennard, 2001:196).

The divide is exacerbated in contexts, such as universities, which are attended by able and disabled students in the same class. Thus I ask if disabled students (in this study, blind students) face exclusion and marginalisation, because of their disability?

ICT, disability and inclusion

Warschauer (online) points out that access to technology goes beyond quantifying those with and without access; far more significant is the use of technology for social transformation. In his book *Technology and Social Inclusion: Rethinking the Digital Divide*, he presents three illustrative vignettes³. All three cases demonstrate that introducing technology to under-resourced contexts does not automatically ensure a socially transformed society if participants are not sufficiently prepared for its use. Thus he emphasises the need for a four-pronged approach to incorporate social, human, physical and digital resources.

In his view, social inclusion refers to “the extent that individuals, families, and communities are able to fully participate in society and control their own destinies, taking into account a variety of factors related to economic resources, employment, health, education, housing, recreation, culture, and civic engagement” (Warschauer, online, page 5 of 7. He continues that there are many ways in which the poor can be included, even though they may lack resources. Even those who are more privileged, may face exclusion on the basis of age, disability, sexual preference or gender. Inclusion is therefore not just about resources, but also about control over life circumstances. In an interview with Raven (2005, online), Warschauer says “Technology for social inclusion deemphasizes the notion of bridging divides and instead looks at the broader goal – achieving social inclusion for all - and then considers the role that technology can play within that”.

³ India’s ‘Hole in the Wall’ project, Egypt’s Model Lab, and Ireland’s Information Age Town

Drawing on the discussion above, it is evident that ICT is occupying a prime position in society today. The question is whether this position offers inclusion for the disabled, particularly the blind, or marginalizes them further in a world that is dominated by the visual. “Inclusion” or “inclusive education” occurs when students with disabilities receive their education within the regular education environment. In their study based in China, Guo *et al* (2005) for instance found that there is a digital divide in Internet use among the disabled⁴ communities. They argue that the use of the Internet can improve the frequency and quality of social interaction, and they add that the Net also reduced barriers in the physical and social environments for disabled people.

In relation to disability and socialisation, Wiazowski (2002) posits that visual impairment hinders social communication, and argues that limited use and perception of body language become hurdles. Thus he sees the use of computers as a source of mutually comprehensible communication.

However, others such as Hatlen (2004), argue that blind students in inclusive settings are socially isolated. He presents that environmental information, spatial knowledge and non-verbal communication is different for both groups, and that the educational modifications for blind students, such as Braillewriters and notetakers actually act as social barriers. Thus the time spent by blind students with blind students are the best social experiences. He adds that this kind of socialisation gives blind students confidence and self-determination. At school level, blind students and their parents have a choice of sending students to schools for the blind and visually impaired, or to inclusive schools. This is not the case at university level. Thus there are contrasting views about disability, socialisation and inclusive education.

In *The Power of Identity*, the second of his trilogy *The Information Age*, Manuel Castells says: “Identity is people’s source of meaning and experience” (Castells, 2004:6). I posit that by examining how the student, Carmen⁵, constructs her identity in relation to

⁴ Their study is not restricted to the blind.

⁵ Not her real name

technology and her social world demonstrates how she views the world, and the extent to which she is empowered or disempowered in a world dominated by the visual.

Constructing identities

In this study, I adopt the views of Hall (1992) and Norton (Pierce) (1995, 1997, 2000)⁶ of identity from a non-essentialist, post-modern perspective. Stephen Hall (1992) says that old identities, which stabilised the social world are in decline, giving rise to new identities and fragmenting the modern individual as a unified subject. This crisis of identity is seen as part of a wider process of change, which is dislocating the central structures and processes of modern societies, and undermining the frameworks which gave individuals stable anchorage in the world (Hall, 1992). Thus, people increasingly make meaning, not on the basis of what they do, but on they basis of what they are, or believe they are.

To illustrate the shift in the construction of identity, Hall (1992: 275 - 277) identifies three concepts of identity: enlightenment, sociological, and post-modern. The enlightenment subject is based on the concept of the human as a unified, centred individual, which emerged at birth and continued throughout the individual's existence. The sociological subject saw the subject as significant only in relation to others who mediated to the subject values, meanings and symbols. Here identity is formed in the interaction between self and society, and bridges the gap between the inside and outside. The subject was thus not composed of a single, but several identities. The post-modern subject is conceptualised as having no fixed, permanent identity. Identity becomes a "moveable feast" (Hall, 1992: 277). Thus, Hall says, the subject is decentred, or dislocated. This is characteristic of late modernity, and with modern societies in constant change, it illustrates a theme of discontinuities (Hall, 1992: 277).

In her work on language and identity among immigrant women, Bonny Norton (Pierce) (1995, 1997, 2000) uses 'identity' to refer to how people understand their relationship to

⁶ Earlier works (1995) are attributed to Norton Pierce, while later works are attributed to Norton

the world, how that relationship is constructed across time and space, and how people understand their possibilities for the future. She refers to West's (1992) view of identity as it relates to the desire for recognition and affiliation (in Norton, 1997). This desire is inseparable from material resources in society, where those with access to such resources are accorded access to power and privilege. Thus identity shifts as social and economic relations change. Human agency and subjectivity (Weedon, 1987) are also foregrounded in her argument. Weedon's theory of subjectivity, for instance, also defines the multiple nature of the subject, subjectivity as a site of struggle, and subjectivity as changing over time.

In the borderless world of the Internet and computer mediated communication, where anonymity and the creation of persona are rife, the construction of virtual identities is prevalent. In her book *Life on the screen: Identity in the Age of the Internet*, Turkle (1995: 9) said of the Internet "(It) links millions of people in new spaces that are changing the way we think, the nature of our sexuality, the form of our communities, our very identities". Our identities may be constructed through personality, social roles, relationships and shared values. These may be manifest through the use of language, names and social cues such as emoticons in virtual environments. In his study of identity and language use in teenage weblogs⁷, Huffaker (2004), for instance describes how American teenagers constructed their identities through their disclosure of personal information, their choice of online names and avatars⁸, and the use of emotive features.

My study, however, is not limited to Carmen's online engagement. I look at how she positions herself in the world, and then in relation to a technology-dominated course.

The study

In my study I was keenly aware of the discrepancies that might surround the use of ICT with sighted and a blind student, as Carmen was the first blind student to do the course in my experience. This gave rise to questions surrounding the use of technology by Carmen.

⁷ A weblog, or blog is a journal that is designed and maintained via the Internet

⁸ Avatars are graphical icons that help represent a real person in a virtual context (Huffaker, 2004)

I was particularly interested in how she perceived the course, as well as how she positioned herself and constructed her identity in the world. The questions I ask are:

- How does Carmen negotiate meaning and construct identity as a blind student in a sighted context?
- What are Carmen's perceptions of a technology-based English course?
- What are the implications for pedagogy in technology-based courses in an inclusive educational setting?

Research approach

I adopted to use a qualitative case study of Carmen because of the ability of the case study to “portray, analyse and interpret the uniqueness of real individuals and situations through accessible accounts”; “to catch the complexity and situatedness of behaviour”; “to contribute to action and intervention” and “to present and represent reality – to give a sense of ‘being there’” (Cohen, Manion and Morrison, 2000: 79). Silverman (2000) adds that qualitative research facilitates a deeper understanding of social phenomena, than does quantitative investigation.

I wanted a broad picture to emerge, where the events in the case study would be allowed to unfold for themselves, rather than to judge and overly interpret as the events occur. In Geertz's (in Cohen, *et al*, 2000) view, the case study should therefore strive to portray what the experience is like in a particular situation and to catch the close-up reality of participants' lived experiences of, thoughts about and feelings for a situation.

The Internet Literacies English course

The research was conducted in a second year English class in the Faculty of Humanities at a university in Johannesburg, South Africa. The course, Internet Literacies (henceforth referred to as IL), is offered at second year level in the Faculty of Humanities at the university. In the course students learn about the ways in which information and computer technology is changing language, literacy and communication practices. Students apply their understanding of technology and cyber culture to projects that involve accessing and evaluating web sites, communicating in online environments such

as web course bulletin boards and discussion threads, and using tools such as Powerpoint and weblogs to apply design technology. The course is divided into three lecture/tutorial sessions, which are centred around the discussion of readings, and a two-hour computer laboratory session each week. Please refer to Appendix 1 for the course outline.

Although the IL course forms the basis of the context, I also refer to conversations held with Carmen about other courses she was studying, as well as her social experiences, in order to construct a more comprehensive picture of her life experiences in and outside the university.

Participants

The course was conducted over a semester of fourteen weeks duration, and was attended by eighteen students of diverse socio-cultural backgrounds. There were four male and fourteen female students, ranging in age from 19 – 22. Ten were mother tongue speakers of English, and 8 were second or additional language speakers of English. The mother tongues of the latter group included isiZulu, Sesotho, Tswana, isiXhosa, siSwati and siPedi. The L1 speakers had previously attended government or private schools, while the L2 speakers had attended government or township schools. Typically, in relation to ICT, private schools are very well-resourced, government schools, marginally or less resourced, while the township schools had limited, or no access to ICT. ICT proficiency is not a requirement for the course, however, basic skills such as the ability to use e-mail and do Internet searches is recommended. Thus, students had varying abilities of computer proficiency, ranging from beginners with very basic ability in word processing and the use of Internet, to students who had worked far more substantially with ICT previously. This inevitably meant that the digital divide made its presence felt in relation to access and proficiency in class. This was further emphasised by a blind student in class. Carmen is a 20-year old blind student who is in her second year of study. Her background is provided in Carmen's story.

Data collection techniques

I spent fourteen weeks as a participant observer in the class, which I also facilitated. I recorded journalistic notes, which Knobel and Lankshear (1999) distinguish from field notes, which are recorded during observation sessions. Journalistic notes are recorded after observation sessions, and I found this more convenient as course facilitator. In addition, Carmen wrote an electronic literacy history, which is a narrative in which she presents an autobiographical account of her introduction to the world of electronic and digital technology. She also kept a two-week diary of her ICT use. We also had several conversations, sometimes informally after class, and sometimes in my office, after which I made note of pertinent points. Finally, she was interviewed at the end of the course. The one and a half hour interview was recorded and transcribed.

Carmen's story

Carmen is a 20-year old English first language speaker from a white, middle-class background. She is the eldest of three children. She was born sighted but developed glaucoma, which eventually left her blind. She attended a kindergarten for sighted learners, but by high school she was totally blind, and attended a school for the blind. She registered at the university in 2004, where she is studying towards a Bachelor of Arts Degree. She is not quite sure what she would like to do at the end of her degree. Her main courses are Applied English, Media Studies, and she started doing Music at the time of this research. She also plays piano.

Initially, Carmen felt nervous about attending the university, which is large, and quite unlike the school she went to. She was orientated around the campus by another blind student, and was eventually able to make her way around campus quite well. I got to know Carmen when she was in my first year English class, and then in the second year class in 2005. We met at the beginning of the semester to discuss the use of technology in the course. At that time she had used the Internet to a limited extent, but not e-mail. She was a little nervous, but really wanted to try out the course. In order not to exclude Carmen from tutorials, we decided to install a voice synthesizer (JAWS) in the computer laboratory, rather than have her work in the laboratory at the Disability Support

Programme (DSP), where JAWS was already installed on all the computers. The DSP is a unit which caters for the needs of disabled students. For instance, computers are installed with voice synthesizers for their use. Notes, tests and assignments are also brailled at the unit. Learning about technology for the blind was a challenge, as I had no previous knowledge of the sophistication of the technology involved. Following discussions with Chantal and DSP co-ordinators, I decided to replace the Powerpoint presentation digital story assignment with something less visual⁹. The rest of the course remained the same.

Carmen records lectures using a Pacmate notetaker, which she synchronises with her computer at home, or at the DSP. She uses a voice synthesizer and screen reader to access information off the computer, or to word process. Voice synthesizers translate text on screen to synthesized voice. She currently uses JAWS. She also uses a scanner in order to scan notes and readings that may not be available on computer. Much of this is done at home and at the DSP at the University. The DSP also brailled tests, assignments and additional notes that I would e-mail to them weekly. On the whole, a 90-minute class took her approximately three to four hours to transcribe, which she had to do every day. However, she maintained a positive attitude:

“I don’t always find it overwhelming. It takes a lot of time and it takes much longer to do things, but you get used to it” (May, 2005).

Carmen’s world: constructing identity and negotiating challenges

Carmen carefully constructed her identity around her blindness, and how she saw herself in her social world. On the whole, Carmen felt that she had learnt to cope with her blindness quite well. Although she could see as a child, she says she did not experience great difficulty on turning blind:

“when it went...it deteriorated gradually, so it wasn’t one day good, then the next I couldn’t see...gradual, not sudden...it didn’t bug me so much” (Interview, May 2005).

As a person, she says she would like to think of herself as friendly and funny, but that she didn’t always know what people thought of her as she associated with people at the DSP

⁹ For her presentation, Carmen kept a diary over two weeks where she reflected on the daily challenges and benefits of ICT, which she went on to reflect on.

in the main. She also only interacted minimally with sighted students in her classes. The difference though, was in her Music class, which she made special mention of, because it was a small class, and people sat with her.

I observed that Carmen always sat in front in class, so she could record classes, while students in IL tended to gravitate to the middle and back of the large tutorial room. When asked how other sighted students responded to her, she said that hardly anyone sat near her, so she couldn't really tell. The IL class was primarily based around small group discussion, and some lecture style classes. The group discussions were unproblematic for her because they entailed other students joining her. What was problematic was that she didn't feel like part of a particular group or 'clique', as students tended to sit next to their friends. A similar situation occurred in another class as well. When asked if other students engaged her in discussion, she said:

Not specifically, no. I think I sit alone in class. Hardly anyone comes to sit near me, I don't know why. Even in (course name removed), it's quite a big class, and there's still one seat empty, but no one comes to sit there. I don't know why people sometimes....how they think...maybe they think because I'm blind...I can't do stuff...I don't understand...I really don't (May, 2005).

She indicates the frustration she feels here when she positions herself as a blind person among sighted students. She tries to explain their behavior, but hesitates, and tails off with the view that perhaps her blindness makes people feel she is incapable. It must be noted that in relation to class assessment tasks, Carmen was an above average student who maintained a strong second throughout the course.

Carmen's construction of herself as blind in a sighted social is demonstrated in the language she uses. She consciously described the situation as "us" (blind) and "them" (sighted). Thornborrow (1999) refers to how our social identities cannot be determined on our own, and that they are bound by how others perceive us. She uses the concepts 'in groups' and 'out groups' to show how linguistically, individuals may be associated with particular groups. Clearly, Carmen felt like an outsider among sighted peers.

These views were not limited to class relationships. She found this evident in the broader social and university world as well, where she felt that sighted people could be insensitive (sometimes unintentionally) towards blind people. An incident occurred when she was on her way to my office and she found obstacles in the passage:

“It’s really funny...like this week there was a table in this passage that had never been there before. I think it’s still there, so I don’t know where these things come from. It can be frustrating. A blind person can tell you where to be careful, not sighted” (April, 2005).

On another occasion, during a particularly rainy week, she also told me about having to navigate through puddles. Carmen tended to walk along walls for guidance, and this is where water usually collected. Here she felt “they should come up with another way”, meaning university authorities.

Other insensitivities unique to the university, was when lecture venues were unexpectedly changed. She had to be taught her where her venues were at the beginning of the semester, and when venues were unexpectedly changed, she felt that this delayed and confused her. She felt it was easy for sighted students to read pinned up notices informing students of venue changes, however, if this was last-minute arrangement, she felt “lost and unprepared”.

Another frustration she felt was when there were components in courses that were visual, which she could not cope with. She described one course, which she had taken the previous year, for instance, which had a large visual component¹⁰. She felt “excluded’ in tutorials because she couldn’t contribute to the discussion. At the time she said to me “What must I do, while everyone is busy? Why should I even attend...it’s the same every week” (May, 2004). She had approached tutors at the time, but apparently changes were not made. This extended to the final exam, when visual analysis questions appeared on her paper and she was expected not to answer them, despite being told that visual questions would be replaced with theoretical questions. She felt this was a shortfall, and that such arrangements should be made beforehand if there were blind students in class.

¹⁰ I do not name other courses in the paper.

Although Carmen felt she had a stronger affiliation with blind students than sighted students, she also sometimes found them too passive. She describes the frustration she felt when there were other blind students in some of her courses:

“When there are a few (blind students) in class, they always sit and relax, then only if I say something then everyone’s aware that there’s a problem. They sit there, take it easy, they don’t actually care sometimes, I think. They never make the effort to find things out, and that stuff. I always have to do it. I get irritated because I feel why must it be only me doing things” (May 2005).

Carmen is a very proactive student (she described herself as “irritating” and “cheeky”) who asks questions if her study material is not ready on time, or if she has problems understanding anything in class. I had to intervene at the DSP on quite a few occasions when her study material was not brailled in time for her tutorials. She said she sometimes felt she had to work harder than sighted students. Her use of the word “relax” and “don’t care” might be a misperception, as most of the other blind students in my experience feel intimidated and disempowered to ask questions, unless specifically approached by the lecturer. In this case, passive blind students became the “they”, or the out group.

On a more social level, Carmen was the only one from a group of blind and partially sighted school friends who attended this particular university. Most of her friends who had been with her school, now attended another university, however, she still counted among her friends those who were partially sighted or blind. This is in keeping with Hatlen’s (2004) findings that blind students in inclusive settings are socially isolated, and that the time spent by blind students with blind students are the best social experiences.

Social occasions usually involved going out for coffee, visiting, and going to a movie if she had someone to tell her what was happening in the movie. She generally found communities relatively friendly, but said she felt a little awkward if she was not addressed directly, and sighted family or friends were asked what she wanted to order at a restaurant, for instance. She expressed her dissatisfaction at not being directly addressed:

“It irritates me...they think you’re blind so you don’t know what you want...you can’t talk for yourself or something” (April, 2005).

To Carmen, being overlooked, and being indirectly addressed was a source of frustration and disempowerment. Thus, she said preferred spending time in the DSP, with other blind students, and catching up on work, which gave her more free time at home.

Perceptions of the Internet Literacies

In relation to the IL course, one of the biggest concerns was that Carmen work with other students in the computer laboratory, rather than on her own in the DSP. This was important to her, especially so that she would not be isolated, or miss out on work:

There's no point always being isolated because I can't see. Why shouldn't I go to the lab. The point is that we working as a class, so why shouldn't I have that opportunity too. Why should I be on my own? I must struggle with the same problems, do what they do... you know sometimes you hear something that you might not have known or something. It's difficult if you struggle on your own at DSP. It could be something that somebody asked that might not come up again (May, 2005).

She found her greatest challenges visual material, and technological glitches. She acknowledged that other students accessed and evaluated visual material on sites, but felt limited that this should be part of the course, as she couldn't contribute to discussion.

Technological problems were far more problematic. Most of the problems arose in laboratory sessions. Because Carmen was the first blind student I had in the IL course, I felt quite inexperienced and inadequate about her requirements, and had to discuss the situation with technicians in the laboratory, as well as at DSP. Initially Window Eyes was installed on one computer for her to work with. This delayed her for two weeks because the technician was late setting it up, and because the system was one she was not used to. Eventually JAWS was installed, which worked much better for her. It was also problematic that the software was only installed on one computer. This was necessary because the laboratory was open to all Humanities students, and had to be booked specifically for our tutorials. She felt that this was inadequate and restricted her. She said:

“It makes me feel really angry when this happens because I feel so powerless. If I did not need JAWS then I would have been able to move to another computer and work there, but I was restricted” (June, 2005).

On another occasion, computers in the laboratory were being upgraded, and I was not told. This meant that JAWS had to be re-installed, and we were only informed during our tutorial. Thus Carmen’s work was delayed because of human error, and she had to play catch up once again. Such incidents saw me working one-on-one with Carmen in the laboratory, or at the DSP, so that she would not be too far behind in her work.

Technologically, Carmen also experienced problems with combo boxes (lists of items), columns and tables, and PDF documents. She said further:

“Computers are very useful and help me quite a lot with my work but if something goes wrong with the computer, and the computer freezes, then there is no way that I will be able to know what is happening....you are left wondering what happened...someone has to help you...this makes me more vulnerable” (June 2005).

When surfing and evaluating websites, Carmen experienced problems with certain websites if the links were not clearly labeled. For instance, she could not maneuver around the academic section of the website of another university in Johannesburg. It was easy to access what she called “unimportant links”, such as student affairs. She found that this was restricting, and would be so for other blind students who tried to access information about courses at the university.

In relation to the web course discussion threads, which we used as a parallel means of class discussion, Carmen had not used e-mail before, and an e-mail address was necessary in order to log onto the class. I helped her create an e-mail address, but she could not sign onto the web course in time. She felt that she could only participate on discussion threads on the web course at time separate from other students because she was late registering for the class. Thus she felt she couldn’t feel the instantaneous sending and receiving of messages when everyone worked together to send messages during lab time.

Because Carmen had never used e-mail before, she had to be taught to create an e-mail address. On a social level, this opened up a world of possibilities for her in the sense she could keep in touch with family and friends. She found this a useful social network, and started to use e-mail quite extensively. She said “It’s not so isolated now”.

Despite the frustrations encountered with the course, Carmen felt empowered at the end:

One of the major changes that the computer has brought about in my life is that I do almost all of my work on the computer and no longer use Braille so often....It is wonderful that the technology for the blind is up to date with regular technology and that blind people are not being left behind or forgotten (June, 2005).

She also felt that by using the Internet she did not have to rely as much on scanning, or on the help of other people. In this way she could work at her own pace.

Pedagogical implications

While it is not unproblematic for a sighted teacher to work with blind students on a technology-based course, it is inevitable that the use of technology in teaching and learning is prevalent today. Thus its use has implications for students from diverse backgrounds, including the disabled. Taking into account the arguments for non-inclusive education for blind students, (for instance Hatlen, 2004), this paper posits that since blind students attend university classes with sighted students, an understanding of how they position themselves socially, within the university, and within the courses they choose to study is relevant to teaching and technical staff. As a teacher, I am more empowered in relation to the technological requirements of for the blind. More important, I got a glimpse into Carmen’s social world, which helps in the understanding of the needs of a blind student.

I do not suggest anything new when I call for deeper sensitivity and understanding of students, however, studies such as this could help sighted teachers of the blind realise the inner struggles of blind students. As a solitary case study, the paper does make assumptions about generalisability, but hopes to open doors to empowering the blind, as well as their teachers.

Carmen's concluding remarks are apt:

“I do not think that it is entirely possible for a sighted person to understand the frustrations and the difficulties that I experience. Sometimes people do try and understand, but it is not easy. They do not always realize that because I am blind I have a lot more work” (June, 2005).

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Appendix 1

Course outline: Internet Literacies

	Lectures	Lab Sessions/ tutorials	Assessment tasks
<i>Week 1</i>	Introduction to the course Surveying the terrain of WWW/ ICT applications Readings: Warschauer (1999) Tapscott (1998)	Proficiency and access survey Intelligent surfing, referencing Introduce assessment task 1 – Electronic literacy history	
<i>Week 2</i>	Terrain of WWW/ICT Readings: Derewianka (1993) Mak (1995)	Evaluating websites: Handout	Electronic literacy history 10%
<i>Week 3</i>	Literacy and the Information Age: Debates Reading: Moran and Hawisher (1995)	Web course management systems: Nicenet handout	
<i>Week 4</i>	Literacy and the Information Age: Debates Readings: Czerniewicz (2001) Negroponte (1996) Tapscott (1998)	Weblogs	
<i>Week 5</i>	Global village, cultural pillage? Globalisation debates Readings: Golding (1998) Barret and Cavanaugh (1994)	E-pals, cultural research	
<i>Week 6</i>	Global village, cultural pillage? Globalisation debates Readings: Continued from last week Review for Test next week	No Tutorial – public holiday	
<i>Week 7</i>	ICT in Africa Digital (un)divide Reading: Warschauer (2002)	Double period Test Hand out essay question	Test 30%

<i>Study Break</i>			
<i>Week 8</i>	ICT in Africa Digital (un)divide Readings: Warschauer (2003); Lelliot, Enslin, Pendlebury (2000)	Using Powerpoint: Tutorial Notes	
<i>Week 9</i>	Memory, imagination and digital story telling Reading: Sanders	Powerpoint: Introduction to digital stories	Essay due 20%
<i>Week 10</i>	Visual literacy/ semiotics/ multimodality Reading: Kress	Powerpoint	
<i>Week 11</i>	Visual literacy Reading: Kress	Powerpoint	
<i>Week 12</i>	English and identities on the WWW Reading: Goodman and Graddol	Powerpoint	Presentations 40 %
<i>Week 13</i>	English and identities on the WWW Reading: Goodman and Graddol		Presentations
<i>Week 14</i>	Exam Revision		Presentations
