

8 Digital Literacy, HIV/AIDS Information and English Language Learners in Uganda

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After lunch we discussed what girls have learnt from each other's presentations. Girls responded positively that indeed it was very interesting and educating to each other, not only to get knowledge and understand about AIDS/HIV but also to learn a computer how it works, internet, how it works, getting information from internet and getting an opportunity to present their findings ... Unbelievable.

Since now they have accessed the information they wanted to know, Henrietta said that now they have joined the group of knowledgeable people around the world.

The excerpts above are drawn from the journal reflections of Daniel Ahimbisibwe, written in September 2006, during a digital literacy course he was teaching to a group of young women in rural Uganda. It captures the excitement the young women experienced at having the opportunity to learn how computers work, and, in particular, how to access valuable HIV/AIDS information on the internet. The course was part of an action research study undertaken by Bonny Norton, Shelley Jones and Ahimbisibwe, with the following two research questions: 'To what extent is digital literacy productive for accessing HIV/AIDS information in Ugandan communities?' and 'What facilitates the development of digital literacy?' In this chapter, we discuss the study and its findings, focussing on the impact of digital literacy on the identities of the participants, who were all English language learners.

Introduction

As many scholars now acknowledge, the 'digital divide' is no longer primarily concerned with the infrastructure of ICTs (information and communication technologies); it is centrally focused on the urgent need to

build human capacity in poorly resourced global communities (Hawkins, 2002; Mitchell & Sokoya, 2007; Mwesige, 2004; Snyder & Prinsloo, 2007; Warschauer, 2003). The building of human capacity can best be achieved through providing access to ICTs, developing ICT skills and abilities; and improving proficiency in the languages of ICTs, the most dominant of which is English. The young women in our study faced challenges in each of these areas. The rural context in which they lived and their limited access to financial resources constrained their access to ICTs, which, in turn, inhibited their ability to develop ICT-based skills and knowledge. Further, although English was the medium of instruction in their upper primary and secondary schools, their access to English outside the school was very limited. In many ways, the challenges faced by these young women in terms of ICT access, skills and language proficiency are reflected in Mwesige's (2004) statement below:

Internet cafes are by and large a reserve of the haves of Ugandan society. Not only do these users have the disposable income required to have access, they also have the requisite requirement of language, for English remains the language of the Internet.

With regard to access to health information in particular, research is demonstrating how young women in Uganda, as in many parts of Africa, face numerous socio-economic, cultural and educational challenges that negatively impact their ability to access the information they require to make informed choices about sexual health and healthy sexual relationships (Jones, 2008; Jones & Norton, 2007; Norton & Mutonyi, 2007). With the acknowledged potential for ICTs to support capacity-building among girls and women in poorly resourced communities (Bakesha *et al.*, 2009; Hafkin & Taggart, 2001; Ochieng, 2000), the purpose of this study was to investigate how the development of digital literacy supports young, rural, Ugandan women's access to sexual health information.

Collections such as Thioune's (2003) argue that the Internet can only become a tool for social development if it is applied in a way that addresses the quality of life of individuals and their hopes for the future. In addressing the daily realities and aspirations of the young women in our study, our particular focus was the way in which digital literacy and training in English dovetailed to provide the participants with access to sexual health information on the internet. Most health information available globally is in the English language, and English is an additional language for Ugandans. English is also an official language in the country, as it is in most countries in Sub-Saharan Africa, and command of the English language is important for educational and professional success. Therefore, teaching the digital literacy

course in English was important for capacity-building. All of the participants had Luganda as a mother tongue, but Luganda is used primarily in oral contexts, and has few textual resources.

In this chapter, we demonstrate how the participants developed digital skills, enhanced their knowledge about HIV/AIDS and negotiated the English language in ways that resonated powerfully with their lives. As Huyer and Sikoska's (2003: 33) note, 'ICT projects should tackle capacity-building issues and themes with application to women's daily lives'. We make the argument that digital literacy can provide girls and women in poorly resourced communities with much-needed opportunities to develop greater human agency with respect to health, in general, and HIV/AIDS, in particular.

Background to Study

The study, which took place in 2006, involved a group of Ugandan secondary school girls of approximately 17 years of age who attended Kyato Secondary School (KSS),¹ located in a village in southwestern Uganda. The study was supported by a grant from the British Columbia association of Teachers of English as an Additional Language (BCTEAL), in Canada. While the primary purpose of the BCTEAL grant was to develop materials to 'integrate knowledge about AIDS with English literacy instruction', we also drew on funds from a federal grant (Social Sciences and Humanities Research Council of Canada) to investigate whether digital access to HIV/AIDS information for English language learners in Kyato might be a particularly powerful means to access HIV/AIDS information. The action research study included development of materials for a digital literacy course taught in English by Ahimbisibwe; the development and analysis of two participant questionnaires, administered, respectively, before and after the course; and analysis of observations written by both Ahimbisibwe as course instructor, and participants as learners.

Literature Review

A review of the literature relevant to our study places the research in a wider educational context, and is drawn from work in two distinct areas: (1) research on 'the new literacies'; and (2) research on applied linguistics and HIV/AIDS.

New literacies

Research on new literacies that is relevant to our project is associated with the work of Barton and Hamilton (1998), Hornberger (2003),

Martin-Jones and Jones (2000), Prinsloo and Baynham (2008), and Street (2001). These researchers take the position that literacy practices cannot be isolated from other social practices, and that literacy must be understood with reference to larger historical, social and economic processes. Thus, while earlier psychological perspectives conceived of reading and writing as the acquisition of particular behaviours and cognitive strategies, more recent insights from ethnography, cultural studies and critical theory have led to the recognition that literacy is not only a skill to be learned but a practice as well that is socially constructed and locally negotiated.

Associated with new literacies is the increasing research on digital literacy, multiliteracy and multimodality (see Coiro *et al.*, 2008). The central tenet of this research is that developments in ICT profoundly affect literacy practices across different sites of learning, and that a 'text' is not only printed material, but includes visual, oral and multimodal products. The complex ways in which schools, families and communities engage in digital literacy practices have become an important site for literacy research and theory, and provide significant insights into the ways in which people learn, teach, negotiate and access literacy both inside and outside school settings. However, as many scholars note (Andema *et al.*, 2010; Mutonyi & Norton, 2007; Snyder & Prinsloo, 2007; Warschauer, 2003), much of the research in this area has focused on wealthier regions of the world, and there is a great need for research in poorly resourced communities to impact global debates on digital literacy.

Applied linguistics and HIV/AIDS

In the literature on applied linguistics and HIV/AIDS, Higgins and Norton (2010) note that while HIV/AIDS has been an object of study for sociolinguists and discourse analysts for approximately two decades, most of this research has examined contexts relevant to gay men in resource-rich nations. The bulk of this research has focused on stigma, risk and sexual identification in face-to-face interactions (cf. Jones & Candlin, 2003). The use of conversation analysis, for example, has provided insight into the ways in which HIV/AIDS counselling is interactionally constructed (Maynard, 2003; Silverman, 1997), while Jones (2002) has examined how speakers frame their activities when handing out informative pamphlets to men they identify as gay in Hong Kong's city parks.

Applied linguistics research on HIV/AIDS in resource-poor contexts is a much more recent development. In a review of sociolinguistic research in public health domains in Sub-Saharan Africa, Djité (2008: 94) concluded that there is a 'relative dearth of sociolinguistic studies in the area of health'

despite the millions of people who are infected across this continent. While studies are still relatively few in number, applied linguists have begun to turn their attention to HIV/AIDS in these contexts, focusing specifically on the creation of knowledge as it is constructed in language and multi-modal semiotic systems (e.g. Kendrick *et al.*, 2006; Mitchell, 2006; Norton & Mutonyi, 2010). These studies reveal the presence of differing worldviews and perspectives at the levels of institutional structures and in the form of cultural practices. Such research is seen to be important for funding agencies in diverse development contexts, which have increasingly acknowledged the importance of understanding local contexts and cultures in order to make progress in culturally appropriate ways (Craddock, 2004; Farmer, 1994).

In the collection of articles in Higgins and Norton (2010), it is made clear that research on HIV/AIDS in any geographic setting must take into account the role of context in the production of knowledge. This is particularly important in resource-poor areas, where educational efforts are often compromised by the limited availability of resources, gender relations and cultural belief systems that differ from Western, biomedical perspectives. In this spirit, we turn next to the research context in which our study took place.

The Research Context

Uganda, where our research study took place, is one of the poorest countries in the world, ranked 145 out of 177 countries on the Human Development Index. It is also one of the countries that had been hit the hardest by the HIV/AIDS epidemic. In Africa, HIV/AIDS transmission occurs predominantly through heterosexual contact (Malinga, 2001), and almost 50% of the HIV/AIDS-infected population is youth. Although the male:female ratio of HIV infection among adults is 1:1, it is 1:4 among adolescents, and some research indicates that girls in the 15-19 year age range are up to six times more likely to contract HIV than boys in their age cohort (Malinga, 2001; Mirembe & Davies, 2001). In addition to physiological factors, the reasons for the acute differential in HIV/AIDS infection rates between young men and women are related to significant sociocultural and economic factors. Young women from poor, rural backgrounds, such as the participants in this study, are particularly at risk as transactional sex is often the only way they are able to forge a better future for themselves by, for example, using money earned through sexual relationships to pay school-related expenses (Jones & Norton, 2007).

In Kyato village, which borders a trading centre that is approximately seven miles from the nearest town centre, Ganda, poverty is endemic and

acute. There is no running water, and the limited electricity available comes from solar power available publicly only at Kyato Community Library. Most of the participants' families survive by subsistence-level farming, with small incomes derived primarily from men's employment as labourers, tailors or taxi drivers. Women can sometimes earn a very small income through the sale of crafts such as mats and baskets, or the sale of extra food grown in family gardens. The official per capita income is less than \$1 US per day. Malnutrition, disease and poor living conditions are widespread. Every participant in this study had been affected in some way by HIV/AIDS: each had lost friends, siblings, relatives and even parents to the disease. HIV/AIDS was never far from their thoughts, and it constituted a perpetual source of anxiety and fear.

Despite the widely acknowledged sex-related dangers young women in Uganda face, they receive minimal sexual health education in school. It is included in subjects like biology, Christian religious education and health education, but there is no comprehensive sex education component of the curriculum (Jones & Norton, 2007), nor are there many other possibilities for youth to access the sexual health services, information and resources they need. Studies have shown health clinics to be generally lacking in outreach, and unfriendly towards youth. Based on the emerging and promising potential of technology to connect learners to global databases (Warschauer, 2003; Wasserman, 2002), we sought to link HIV/AIDS education and digital literacy in our action research. We were also aware that our learners have a mother tongue other than English, and so promoting access to the digital world would not only provide extensive access to HIV/AIDS information, but, given the predominance of English on global health websites, enhanced opportunities for English language learning.

The Study

In order for the participants to access health websites at the closest internet café in Ganda, they needed a comprehensive introduction to computers and digital technology, as well as hands-on practice. Jones, who had worked closely with the participants on a daily basis for one year (2004-2005) for her PhD research, developed the digital literacy course, which took into account the fact that the participants had had very little experience with computers or the internet. The course was comprised of an intensive six-session, 46-hour curriculum that took place from August to September 2006. The instruction took place in both the Kyato community library, where a computer and solar power were available, as well as the internet café in Ganda, which was about a 45-minute walk from Kyato village. In order to address

our two research questions, we developed two questionnaires, which we refer to as Q1 and Q2, respectively. These questionnaires were written in English, because English is the language of instruction in schools, and the print most familiar to the participants. English is also used for ICT-related terminology. In Q1, administered before the course, we asked the participants their expectations of the course, their interest in computer literacy, what they knew of the internet and the extent of their interest in health information and HIV/AIDS in particular. Q2, administered at the end of the course, included the following areas: What participants had learnt from the course; what benefits technology and the internet might have for the future; what health information they had acquired; and what information about HIV/AIDS they might still like to get. Ahimbisibwe, the course instructor, also kept a detailed journal during the course, and adapted the course to suit the needs of the learners.

Findings

Questionnaire 1

In Q1, we learnt that 10 of the 12 participants had never used a computer before. Of the two who had, one had used it 6-10 times in the past year, in the Kampala district; the other had used it about once a month in the Kyato community library. The computers had been used for such activities as writing letters and essays. All participants indicated that they would like to use a computer more often. With regard to the internet, although 11 had heard of it, four had little knowledge of exactly what it was. As Sofia noted, 'I have heard about the word internet but I don't know its meaning'. There were five, however, who understood that the internet was associated with access to information, as exemplified by Sofia's comment, 'I know that internet is a world wide web where you can get information from different countries'. The remaining two participants focused on the communication possibilities of the internet, as Henrietta noted, 'The word internet means the world wide web. This means people can communicate through computers'. Not one participant had used the internet over the past year, but all of them indicated that they would like to use the internet more often. Most indicated that instruction and practice was necessary to enable them to use the internet. As Doreen noted, 'I will need training because I don't know how to use it', while Shakila wrote, '1st teach me about the internet and provide as many as possible so that we use them frequently'.

When asked, 'What health information, if any, would you like to get from the Internet?' 11 of the 12 participants indicated that they would

like to get information about HIV/AIDS. Participants were interested in a range of issues, including the causes of AIDS; how to reduce AIDS; how to help people live longer; how to treat people with AIDS; and how to prevent AIDS. Henrietta, in particular, focused on the impact of AIDS on youth: 'I want to know more about HIV/AIDS because it is the killer of the youth and we don't know more about it'. The one participant who did not mention AIDS, Sofia, expressed an interest in the brain and heart, 'The health information I like is to know about the brain of human beings because some are thinking more and others less and also on heart diseases'.

When asked what other information (apart from health) the participants would like to get from the internet, there was a wide range of responses. Shakila noted, for example, that she wanted 'Information concerning with problems of girls and jobs of women in all the world'; Caroline noted that she wanted 'information about different kinds of people from different countries'; Tracy wanted knowledge about 'female bodies, how do they look like'; and Henrietta wanted 'to know more about English'. In response to the question about their 'main interest' in learning more about the internet, Sofia added the following new information, 'I want to know everything which can help my life now and in the future'. The desire to connect with Canadian people was also mentioned as a desirable outcome of internet access. As Henrietta noted, 'I will learn more about myself from sharing view with Canadian people'; and Jenenie noted as follows, 'My main interest in learning more about the internet is that I want to make friends outside my country like in Canada'.

With reference to course expectations, six participants hoped that the course would increase their employability. Gelly wanted more job opportunities; Penina wanted to be an entrepreneur; Tracy, a doctor; Gloria, a dress-maker; Sofia, a business person; and Jenenie, the head teacher of a secondary school. The remaining participants wished to learn more about computers, and how to use them for communication, entertainment and access to information. In response to the question, 'How do you think you could benefit from learning to use the computer?' Henrietta and Jenenie added the following additional information. Henrietta noted that 'I will understand more about English language', while Jenenie noted that she would become 'mentally modernized'.

The digital literacy course

The data from the digital literacy course was also very revealing. The first session of the course, which took place on Sunday, 20 August 2006, in the Kyato community library, introduced the participants to the objectives of the course, and the research study more broadly. The 12 participants

also signed consent forms and completed Questionnaire 1. In his journal, Ahimbisibwe notes, 'I could tell from the faces of the girls that they were interested', and he comments that questions from the participants were 'endless'. Such pressing questions included: 'What is a computer? How does it work?' The second session provided an introduction to computers and other technological equipment such as printers, digital cameras and digital recorders. The participants were also introduced to internet vocabulary such as search engine, website, keywords, toolbar and home page. 'They were all enthusiastic to start', writes Ahimbisibwe. After lunch, each participant had 15 minutes on the library computer, and learnt to open a Microsoft program, type a few words, and save a file. 'Each girl was fidgeting to be the first one to sit on computer as it was their first time to use the computer', Ahimbisibwe says. Indeed, he notes, 'it was not enough to some of them. Up to evening they wanted to go on and on'.

In preparation for the third session, which focused on the internet, Ahimbisibwe visited the internet café in Ganda and did a Google search on people and places that would be familiar to the participants, including their home village and the names of the researchers. He then photocopied the documents and made copies for each of the participants. During the third session, 'all the girls were so attentive and eager to see what I have for them', notes Ahimbisibwe. The day was a very productive one, in which the participants learnt much about the internet and its potential, and reviewed the materials that Ahimbisibwe had brought.

Session four was the first visit to the Ganda internet café, reached by local taxi, and took place on Sunday, August 27. As noted above, not one of the participants had ever used the internet before. The participants worked in pairs to search for information on HIV/AIDS, and, as Ahimbisibwe notes, 'the girls were very excited by the whole thing. You could hear them exclaiming at whatever they saw on the monitor'. In the discussion that followed, the participants noted that the following were the issues they would like to learn more about: How AIDS spreads and ways of avoiding it; the number who have died of AIDS throughout the world; signs and symptoms of AIDS; the origin of AIDS; the treatment of AIDS; antiretroviral drugs; prevention of mother to child transmission; testing centres. 'The questions were so many', Ahimbisibwe notes.

In the fifth session, which started in the library and continued in the internet café, the participants worked in pairs to search for the information that they had identified as relevant to HIV/AIDS. Ahimbisibwe notes that after the participants had found the particular information they wanted on HIV/AIDS, they 'wanted to look at other interesting things on the internet as it was the chance and they don't know when they will get another one

to look at other things'. In the discussion after the visit to the internet café, the participants shared the information they had found, and Ahimbisibwe made the following significant observation, as quoted above: 'Since they have accessed the information they wanted to know, Henrietta said they have joined the group of knowledgeable people around the world'.

It was in the sixth session, held on September 3, that Ahimbisibwe commented on the 'unbelievable' events in the classroom, as quoted at the beginning of this chapter, and the course ended with a final visit to the internet café, on Wednesday, September 6. Ahimbisibwe notes in his journal how enthusiastic the participants were, because they knew how to use the computer and the internet. The participants had planned ahead, and knew what topics to research. 'Although they still had problems with how to handle the mouse and move the cursor properly, but they knew what they were doing'. Ahimbisibwe adds, however, that issues of broadband became a challenge for the participants. 'Another difficulty they face is some computers are very slow when it comes to the internet so they were complaining that all their time went without actually getting to the website'. After lunch, Ahimbisibwe led a discussion and writing session about what the participants had learnt, and the participants completed the second questionnaire.

Questionnaire 2

While space does not permit a comprehensive review of what each participant had learnt in the digital literacy course, which was the focus of Questionnaire 2, we will provide key data with respect to access to information in general, and access to information about HIV/AIDS in particular. First, it was clear that participants needed to learn how to use a computer before they could access health information on the internet. The comment from Henrietta captures many of the responses to the question, 'What did you learn from this course?'

I learnt how to use a computer/introduction to the computer. I learnt to access information on the internet. I learnt how people can communicate through internet. I learnt how people get information from the internet. I learnt the methods of preventing HIV/AIDS and all about AIDS.

The participants noted that 'computers make the work easier', that they 'save time', that they are essential for 'accessing information', and that they promote 'communication with other people'. The role of English in internet

information was noted by Henrietta, who wrote that she 'had learnt the English language' on the internet, because it is 'arranged properly'. A number also noted that knowing about computers and the internet is important for future employment. As Gelly noted:

I have learn how to use a computer, how to write the information on the computer and how to search the information on it. It can help me to get job opportunities in my future because now days every job needs to be with an experience to computer such as being an office manager, secretary accountancy and others.

Participants noted that there was still much they would like to learn about computers, such as developing their own websites, uploading photographs and using Skype (or, as Tracy noted, 'learn to talk to somebody while his or her image appears on a screen'). With reference to cultural practices, Doreen noted that 'I would like to learn more about the behaviours of other girls outside Uganda because me as I am I behave the way I behave like a Ugandan girls so what about others?'

With reference to access to health information, and HIV/AIDS more specifically, there was overwhelming consensus that access to the internet had provided crucial and comprehensive information about HIV/AIDS. By way of example, Yudaya noted,

I have got health information from the internet which concern to the HIV/AIDS. Now I know how to prevent AIDS/HIV and other information about it. AIDS stands for acquired immune deficiency syndrome and what of HIV is human immune deficiency virus.

Gelly noted that she had been surprised to find that the 'highest percentage of people who die AIDS are youth/teenage this is very dangerous because me also I am a teenager'. Shakila, from a slightly different perspective, discussed not only how to protect herself, but how to advise others:

From the internet I searched different information on some of the health information is about AIDS/HIV from the internet. Now I know how to protect myself from HIV/AIDS, how to know that someone is HIV positive, what to do if I become affected that I rest, I don't work hard, I have to look for treatment that I can get ARVS that stop the cells to multiply. I knew the symptoms of AIDS but I got all these from the internet. Through the use of internet just know I can advise different things to my friends about HIV/AIDS.

In a similar spirit, Sofia noted not only that 'I can be prevented using condom' but that 'I can counsel somebody with AIDS by telling him that being HIV positive it doesn't mean the end of your life'. Gelly noted, in addition, that, 'someone with AIDS may experience the wide range of different diseases and opportunistic infection'.

A number of participants were particularly concerned about the way in which AIDS had affected their own country of Uganda, and noted that they had learnt more about the relationship between AIDS and development. Fortunately, much new and important local information was also learnt on the internet, such as the role of TASO, Uganda's leading AIDS Support Organization, which has 'tried to look after the affected people through rendering services'.

Other health information, particularly relevant to Uganda, was also searched on the internet, including information on malaria and early pregnancies. For example, Sofia noted as follows:

From the internet I have got some other information like the information about malaria and so I want also to know more about it like how it spread, its symptoms and how it can be prevented because malaria is a very big problem in our area so more information is needed from that.

With regard to early pregnancies, Doreen noted as follows:

On the internet I searched many health information including AIDS/HIV/STD and other diseases like malaria. Apart from these I searched about girls who become pregnant when they are still at school. I found it and they are very many who become pregnant and some are ending up affected with AIDS so what should we do?

As if in response, Tracy noted as follows:

It was very important and interest for me to know how to prevent pregnancy when I am still studying like using contraceptives and abstinence from sex. I became happy because some of us don't know how to prevent pregnancies and we do lack some information.

When asked what other information they would like to share with the researchers, many participants expressed their appreciation for the course, as exemplified by Shakila: 'For me I just thank you for your organization because it has been good and beg you to help and organize other courses like that one because we learned many things. So thanks'.

Discussion

In our research project, we sought to determine, with respect to the participants in our study, if digital literacy was productive for accessing information about HIV/AIDS, and the conditions that facilitate the development of digital literacy. At a quantitative level, it is interesting to note that although Q2 was modelled on Q1, and participants were given the same number of pages (4) in which to write their responses, the responses in Q2 were considerably longer and more developed than those in Q1. A computer word count provided an approximation as to the difference between the total length of responses in Q2 as opposed to Q1: There were 6294 words in Q2 and 3260 words in Q1. This suggests that the participants had much to say about the course and their internet searches, and their learning was reflected in the comprehensiveness of their written responses.

Our central finding, then, is that the internet provided multiple opportunities for participants to gain access to information about HIV/AIDS and to use English in meaningful ways. Perhaps more interesting, however, are our findings with respect to our second research question, 'What facilitates the development of digital literacy?' To address this question, we have found research on identity and language learning very helpful, particularly with reference to work on investment, imagined communities and imagined identities. Although these areas are highly related, we will address each in turn, as they represent somewhat different perspectives on the development of digital literacy.

Investment and digital literacy

With regard to investment and digital literacy, Norton (2000, 2012) has argued that if learners 'invest' in learning a language, they do so with the understanding that they will acquire a wider range of symbolic and material resources, which will in turn increase the value of their cultural capital and social power. The construct of investment conceives of the language learner as having a complex identity, changing across time and space, and reproduced in social interaction, both oral and written. It provides for a particular set of questions associated with a learner's commitment to learning the target language. In addition to asking, for example, 'To what extent is the learner motivated to learn this language?' the researcher asks, 'What is the learner's investment in the language practices of this classroom?'

There is abundant evidence to suggest that the participants in this study were highly invested in the language practices of the digital literacy course. In Q2, all the participants noted how much they had learnt in the

course, and how interested they were in the diverse aspects of the course. Their appreciation was effusive, with participants like Shakila noting that the course ‘has been good and beg you to help and organize other courses like this one because we learned many things’. Ahimbisibwe also noted frequently how excited the participants were. ‘I could tell by their faces that the girls were interested’, he notes on the 20th August; ‘they were all enthusiastic to start’ he continues on the 23rd; and on September 3rd, noted that it was ‘unbelievable’ what progress the participants had made.

Part of the girls’ investment in the language practices of the digital literacy course was the opportunity to access the English language in multiple new ways. Some of the participants saw engagement with ICTs as not only a tool through which to communicate, but also as a tool that would help them communicate in English. For example, in response to the question, ‘How do you think you could benefit from learning to use the computer?’, Henrietta noted that she would ‘understand more about English language’.

The three particular areas of interest noted by Ahimbisibwe also provide important clues as to why the participants were highly invested in the language practices of the course: the participants had access to information about HIV/AIDS; they had learnt how computers and the internet work; and they had been given the opportunity to share their learning with their peers in presentation format. Prior to the course, Ahimbisibwe notes, these were all ‘very new things which they didn’t have hope to access in the near future’.

The research context provided at the beginning of this chapter gives some explanation as to why these language practices were hitherto unavailable to the participants. Information about HIV/AIDS is difficult to access in remote Ugandan communities, and HIV/AIDS is a topic that both parents and teachers tend to avoid. As Norton and Mutonyi (2007) note, HIV/AIDS are one of the few sites in which young people can access information on the disease, and ‘Talk what others think you can’t talk’. Further, access to computers and other technology is very difficult in rural Uganda, primarily because of the expense involved, and the great inequities between urban and rural areas (Mutonyi & Norton, 2007). In addition, as Jones and Norton (2007) note, young women in particular struggle to fund even the most basic necessities of life, and paying for computers and internet access would be a luxury way beyond the budgets of young rural women. It was interesting to note Ahimbisibwe’s observation that after the participants had found the information they wanted on HIV/AIDS, they turned their attention to ‘other interesting things on the internet’ as they didn’t know when they would be given this opportunity again.

The student-centred pedagogy of the course, which included pair and group work, class presentations and regular student–teacher interaction, was also novel for these young women, who were accustomed to large, teacher-fronted classrooms. In Jones’s doctoral research, participants had shared with her their experiences of many unsatisfactory classrooms, as evidenced in the following extract (Kendrick *et al.*, 2006: 110):

- Shelley:** How is learning English through doing a project like this different from learning English in the classroom?
Rose: In class teachers write on the blackboard – and we just listen ...
Shelley: In the research project how do you use English?
Rose: Communication.
Shelley: Do you learn more by studying English or by communicating in English?
Rose: Communicating ...
Shelley: Why?
Rose: Because when you communicate, you think your own English.

It is clear from the data that the participants in the study were ‘thinking [their] own English’, and it is this ownership of meaning-making that was central to their investment in digital literacy.

However, the participants’ investment in digital literacy extended beyond issue of health, to include ecological, educational and gender issues of particular relevance to development. In response to the Q2 question, ‘Is there any other information you would like to share with the researchers?’, Penina, for example, commented: ‘Thank you for your information but I suggest an idea that next turn let’s be on the environment and the animals’. Tracy said: ‘Yes! I would like to share information about how the liberation of women has helped in development’. Henrietta stated: ‘I want to share the information with researchers about education. Who introduced education, how did he understand that people should get education’. Doreen remarked: ‘Of course! There other information which I would like to share with the research. It is about education in both girls and boys, and how we can develop our talents like reading storybooks, singing, etc’. And Caroline responded: ‘Yes. The information about rape and defilement, the factors leads to its increase in Uganda and how to overcome it’.

The participants were also invested in digital material on global issues of importance to them. At the time this research was conducted, the Iraq War was into its third year and the participants were very interested to learn more about the war and international figures, such as Saddam Hussein and George W. Bush. Doreen wrote ‘On the internet also I got information about

many people for example Saddam Hussein whereby I searched his image and I see him with some of his information. I didn't searched Saddam only but also I searched our president Museveni and I managed to see him on the Internet so this was so great for me'. Tracy explained how the internet provided her with information she had not been able to get otherwise, and thus enabled her to extend her representations of the war: 'I searched for Bush George's picture on the internet via Google search, I saw how Bush looks like. More also, I looked for Saddam's picture. It was very interesting because I was just hearing of their names without seeing them'.

Imagined communities and digital literacy

Related to the construct of investment is that of imagined communities and imagined identities (Anderson, 1991; Kanno & Norton, 2003; Norton, 2001; Pavlenko & Norton, 2007). Benedict Anderson (1991: 6), who first coined the term 'imagined communities', argues that what we think of as nations are imagined communities, 'because the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion'. Thus, in imagining ourselves connected with our fellow human beings across space and time, we can feel a sense of community with people we have not yet met, but perhaps might hope to meet one day. Developing this notion with reference to language education, Norton and colleagues argue that in many language classrooms, learners may be given the opportunity to invest not only in the classroom community, but also in communities of the imagination – a desired community that offers possibilities for an enhanced range of identity options in the future. They argue that such imagined identities can be highly varied, from the imagined community of the more public professional, such as doctors, lawyers and teachers, to that of the more local homemaker or farm worker.

Language learners have different investments in a range of identities, and of particular interest in this study was the extent to which such investments were productive for the development of digital literacy. In spite of the digital divide, and the fact that none of the participants had had any sustained contact with the internet before this study, they quickly embraced the digital as a means through which they could appropriate new identities and engage with a wider range of communities. Tracy, for example, specified her interest in becoming part of a global academic community, as she wanted: 'To talk with people from different countries like to acquire some information from outside universities'. Likewise, Joanne commented: 'I would also like to get discussion with other students in other country. And

also I would like to get skills how I can also start my own project in future'. Of great significance, however, is that the participants did not wish to simply become consumers of information; they also wanted to be producers of information. Penina imagined herself contributing knowledge and ideas to others through publication: 'According to me I want to learn it to become one of the most people who can use it and to become publicable'. Sofia expressed a similar idea: 'I would like to share with the researcher in writing academic book or research'. Such global knowledge production is strongly advocated by scholars who wish to ensure that African ideas, knowledge and experience are well represented in the international literature (Andema *et al.*, 2010).

While some the participants expressed their desire to take an active part in global knowledge production, others were primarily interested in expanding their friendship networks outside Uganda. As Jenenie noted, 'My main interest in learning more about the internet is that I want to make friends outside my country like in Canada' while Gelly stated: 'I heard that computers are usually used on the internet so I would like to know how to use it, and how to send messages from outside countries'.

In the process of engaging in digital literacy with respect to imagined communities, gender issues were also central concerns for these young women (cf. Mitchell & Sokoya, 2007). Doreen expressed her interest in learning more about the lives of other girls in the world to expand her understanding of what it means to be a girl beyond the only context she knew – that of rural Uganda. Shakila, similarly, sought to learn about the experiences of girls in different parts of the world by accessing information on the internet, and in particular, what she called 'information concerning with problems of girls'. With a related focus, Tracy wanted to know about 'female bodies, how do they look like', suggesting that she was interested in expanding her understanding of herself as a young woman, as well as her general understanding of the physical body, '.... because I am soon becoming a doctor'.

Imagined identities and digital literacy

Norton (2010: 356) argues that 'an imagined community assumes an imagined identity, and investment in the target language must be understood within this context'. There is much evidence to suggest that the development of digital literacy provided an enhanced range of identity options for the future of these young women, identities that could be considered imagined identities. Particularly profound is the comment by Henrietta, that 'they have joined the group of knowledgeable people around the world'.

In a related comment, Sofia noted that her 'main interest' in learning more about the internet was that it enabled her to 'know everything which can help my life now and in the future'. In similar comments, several participants expressed the desire to engage in activities that would enable them to develop, change, or deepen their understanding about themselves as young women in the larger global context. These comments speak to the need for educational opportunities that cultivate girls' capabilities and empower them to engage more fully in the world (Jones, 2011).

Future employment was a central concern for these young women, most of whom struggled economically. Penina wanted to be an entrepreneur; Tracy wanted to be a doctor; Gloria, a dressmaker; Sofia, a business person; and Jenenie, the head teacher of a secondary school. To realize such imagined identities would be rare for many rural Ugandan women, but the participants hoped that digital literacy would help them achieve their ambitions. Caroline expressed her belief that, given time and experience with ICTs, she would become more confident and better able to interact effectively and meaningfully with people around the world. Similarly, Jenenie imagined herself as 'popular' in a global context: 'My main interest in learning more about the internet is that I want to make friends outside my country like in Canada so that I become popular worldwide through writing letters'.

Using the internet to access information about people and places with whom they had personal connections was of great interest to the participants, as it seemed to bridge the gap between the virtual and the real world, linking their identities (as, for example, students, community members and research participants) with the larger world on the internet. For example, Shakila stated:

I got information about the location, history of [Kyato] Community Library, I searched information about Shelley her background, what she did in Uganda and Canada particularly. I searched information about Mr [Masinde] the founder of [Kyato Secondary School] and why he established the school the aim, location and the beginning and history of it. I searched the main players of [Kyato] Community Library ... and their history. And where the library started from.

Conclusion

In responding to diversity in language and literacy education, McKinney and Norton (2008) have noted that teachers need to consider not only what is educationally possible, but what is also educationally desirable. In many

poorly resourced communities, in Africa and other parts of the world, what is 'possible' may appear bleak and discouraging. Indeed, without resources provided by sponsors, our study would not have been possible. Sustainability therefore remains a major challenge not only in our project, but also in other national projects in Uganda and beyond. However, what is clear from our study is that the hopes and desires of young people in the most rural parts of Africa are no less ambitious than those of young people in Singapore, Seattle or Sydney. The young women in our study wanted access to current and reliable information on health, job opportunities, diverse international communities and the English language. Further, they not only want to be receivers of global information; they want to produce information, make their own websites, Skype with friends and engage actively in global knowledge production.

Our study not only provides convincing evidence that digital literacy is highly productive for accessing information about HIV/AIDS in Ugandan communities but also demonstrates that learners are interested in a wide range of topics, including gender and development. The study also confirms that digital literacy takes place, most effectively, when learners are invested in the language practices of their classrooms and communities, and when they can draw on digital information to develop an enhanced range of identity options for the future. This has important implications for English language learning and teaching. The English language learners in our study were able to imagine and appropriate identities as autonomous learners, informed global citizens and HIV/AIDS counsellors. The challenge for the global community is to collaborate with African partners to ensure that the imagined identities of English language learners are not only educationally desirable but also educationally possible.

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Note

- (1) Pseudonyms are used for the names of the school, village and research participants to protect the identities of those who were associated with this study.

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