

Digital competence and the language issues in South African classrooms

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Historical background

After the first democratic elections in South Africa in 1994, President Nelson Mandela came to power after almost 40 years of apartheid regime. Having experienced an unjust educational system based on racial segregation and separate development, the demand for democracy and quality education for all was evident. The African Nationalist Party (ANC) embodied the right to a basic education in the new constitution. Additionally the constitution declares that all the eleven official languages of South Africa have equal status (The Constitution of South Africa, 1994, p. 6). This policy, which may seem progressive, in reality mostly builds on divisions practised by the apartheid government as the African languages are those assigned to the different former “homelands” (Alexander, 1989, 1995; Makalela, 2005; Prah, 1998). In the Western Cape Education Department (WCED) language in education policy (chapter 6.1) it is declared that in all current legislation, both stately and provincially, the learner has the right to choose the language of instruction or the language of learning and teaching¹ (Western Cape Education Department, 2002).

Given the historical disparities of the nation and many commendable efforts it remains a challenge to form inclusive policies of education notwithstanding policies that are implemental in a country of such great diversity. One of the great challenges in the new South Africa is the language issue. During the apartheid period, a language policy was used for political purposes to further separate different learner groups (see for example Fiske &

¹ In this paper I use the phrase “language of learning and teaching” (LoLT) instead of “medium of instruction” or “language of instruction”. When talking about language of instruction it indicates a certain understanding of how teaching and learning takes place. The role of the teacher is more of an instructor where the teacher uses the traditional talk and chalk method. The use of ICT calls for greater participation of the learners and greater co-operation between the teacher and learner. The use of LoLT does to a greater extent imply to this changed role and the term has become more widely used in the educational discourse in South Africa after Apartheid. Emphasis is now on greater participation and different teaching methods compared to those used during the Apartheid period. It has a broader reference than the former term as it places emphasis on the language in which the child learns (LoL) which usually is the home language as well as the language of teaching (LoT) (Arthur, 2001; Department of Education (DoE), 2004). To make the term more complicated it is not always that the home language and the language of teaching used in the classroom is the same.

Ladd, 2004; Stevens, Swart, & Franchi, 2006). By the end of the apartheid regime learners of different races were all under different departments of education.

Language of learning and teaching

English has predominantly become the language of learning and teaching from grade four onwards which has proved to have severe implications for the achievements and the cultural and linguistic identities of the learners. This is despite the fact that little over 8% of the total population in South Africa and less than 20% in the Western Cape province consider English as their mother tongue (Burger, 2006). The South African language board released a national sociolinguistic survey of language use and language interaction in South Africa in December 2000 (PANSALB, 2000; PANSALB News, 2000). Some of the findings were exceptionally noteworthy as they challenged the commonly held belief that everyone in South Africa understands English and therefore English should be the dominant language in the education system. According to the survey, more than 40% of the people in South Africa answered that they do not, or hardly ever, understand what is being communicated in English. In the report it is concluded that “the printed media, communication by politicians and language policy in schools are among the more prominent examples of failure to accommodate the language preferences of millions of South Africans” (PANSALB, 2000, p. 189). Extensive research has also revealed that it is in the interest of the learners to be taught in their own mother tongue (Brock-Utne, Desai, & Qorro, 2003, 2004, 2006; Hólmarsdóttir, 2005; Obanya, 2004; Plüddemann, Mati, & Mahlahela-Thusi, 2000).

Information and Communication Technologies

Another important issue in South Africa after Apartheid was how to become an active member and participant in the global information society. There was a hope that Information and Communication Technologies (ICT) would bring solutions to the challenges of Education in South Africa. “It is no longer sufficient for government education departments to guide ICT policy and to rely on local initiatives. In the twenty-first century it is essential for national education departments to initiate education-related ICT policies” (Howie, Muller, & Paterson, 2005, p. 8). One of the main reasons why this is important is to ensure that ICT access and skills do not exacerbate the already great inequities in education (ibid). President

Thabo Mbeki highlighted the importance of ICT for social and economic development in South Africa by saying: “We must continue the fight for liberation against poverty, against under-development, against marginalisation” and “... information and communication technology ... is a critically important tool in that struggle” (Mbeki, 2001).

Regardless of growing awareness and discussion within the ANC in the 90’s on forming policies on the information society, it was not before 2004 that a white paper was issued by the Department of Education on e-education². The Minister of Education at the time, Ms. G.N.M. Pando states in her foreword in this document that:

Information and communication technologies (ICTs) are central to the changes taking place throughout the world. Digital media has revolutionised the information society and advances in ICTs have dramatically changed the learning and teaching process. This has opened up new learning opportunities and provided access to educational resources well beyond those traditionally available.

We want to ensure that every school has access to a wide choice of diverse, high-quality communication services which will benefit all learners and local communities. The services provided by the initiative will enhance lifelong learning and provide unlimited opportunities for personal growth and development to all (Department of Education (DoE), 2004, p. 6).

Addressing the diversity

South Africa is a country of great diversity. It is divided into nine provinces and each of them has its own Education Department with different points of departure when it comes to policy formation and emphasis on ICT and language policies. The Western Cape Education Department (WCED) has been seen progressive and leading when it comes to implementing ICT within the educational sector. The so-called Khanya model, which will be explained below, is in fact been considered in other provinces in the country (van Wyk & Lintvelt, 2007).

According to the WCED web pages the Department plans to use ICT in schools to:

² There are several other policy documents on ICT and the information society to be found before the white paper on e-education was issued. An overview and discussion of those can be found in Howie et al. 2005. However van Audenhove (2003, p. 3) states that “the fragmented nature of references to the information society in the form of speeches, policy debate and policy documents, makes it difficult to assess their centrality within actual policy and policy implementation”. Statements are scattered and, according to van Audenhove (2003, p. 2) “to date [2003] there is no document defining the government’s view of the information society, no policy document outlining an integrated strategy to arrive there and no government department officially responsible for the co-ordination of policy initiatives”.

- deliver and support curriculum
- help in raising the levels of teaching and learning in disadvantaged schools
- educate and support educators
- eliminate the digital divide
- empower learners to join the global knowledge community
- encourage learners to prepare themselves for careers in the sciences, engineering and ICT
- collect and distribute administrative information
- ensure that all schools in the province, rural as well as urban, have immediate access to curriculum and administrative information (WCED 2003).

The Khanya initiative was established in order to address the growing need and demand of ICT in the educational sector in the WCED in April 2001 (Scipio, 2006). Khanya was to improve learners as well as educators' possibilities to use modern technology and to correct some of the injustices of the past and to gain better access to knowledge and information.

In the spring of 2007 Khanya had implemented, beginning by integrating computer use in 860 schools, which incorporates approximately 16,000 educators and over 530,000 learners (Steinmair, 2007; van Wyk, 2007). On the WCED web pages (2003) it was argued that:

In the age of the Internet, ICT has become the universally preferred set of tools for storing and exchanging knowledge and information. Despite the more traditional environment of schools, it can play an invaluable part here too in fulfilling these two functions... ..In classrooms too, this ideal is gradually being reached through the successive roll-outs of the Khanya project... .. These learners [e.g. learners in the Khanya schools] have the opportunity to extend their learning through computer-aided instruction, resource-based learning, taking part in international projects, communicating with others throughout the world and creating exciting multimedia presentations.

Through the Khanya project, Western Cape learners have received a great opportunity to access computers. However, the question is whether learners are taking advantage of these opportunities or if there are other barriers that hinder the use of computers in the classroom. In issue number ten of the Khanya magazine the programme manager, Kobus van Wijk, considers the reasons why the use of computers in some of the Khanya schools is not optimal. One of the most common reasons he mentions is related to technical problems as the project has limited resources for technical support. Another explanation is that despite extensive training, teachers are not well equipped to use the technology for its intended purposes. Van

Wijk states, “most likely they’re [the teachers] not confident in using technology as a teaching tool. They may be comfortable using it as a productivity tool, but they haven’t yet made the shift towards using computers for teaching” (van Wyk, 2007, p. 5).

As one of the main aims of the Khanya initiative is to diminish the digital divide by enabling every learner and teacher access to the technology, it is necessary to reflect on the role of teachers. Therefore, although success stories can be found, if the teachers are not confident in using the technology, how are the learners expected to take full advantage of the available technology?

School profiles

In my ethnographic fieldwork in three ‘Khanya’ schools³, plus additional visits and observations in three other schools in the province, my focus has been on exploring if there are differences in the computer/Internet use of the learners inside the schools according to the LoLT and additionally to explore learners’ computer/Internet/cell phone use outside of school⁴. The findings presented here are preliminary. Interviews with learners, teachers and other relevant persons have not yet been transcribed fully and field notes and other documentary data have not been categorised entirely. In addition, it should be noted that my findings can only indicate the situation in the province at a whole and no attempt is made to generalise the findings to South African primary schools in general. The main focus here will be to explore the underlying variables of the digital divide and observe how languages influence learners’ use of computers within the schools.

The digital divide has earlier been explained as having access to ICT or not.⁵ This only explains a part of the situation. It is correct that statistically greater access has been gained in most places of the world, but access alone does not necessarily go hand in hand with increased use of ICTs.

This paper is based on data gathered during six months of ethnographic fieldwork. During the observational period all the 7th graders in three schools answered a survey on their computer use in and outside of school. Additionally 32 learners have been interviewed, their

³ The three Khanya schools were chosen from a list of Khanya schools from the criteria of having different LoLT, being located in different parts of the city and having non white learners or those previously categorised as disadvantaged learners.

⁴ In this article only the findings from the three Khanya schools will be discussed and only use of computers within the schools.

⁵ Many different definitions have been used for the digital divide. I support the views of a multiple approach, not only focusing on material access but also including human, digital and social resources as well as political will, laws and regulatory frameworks etc. See for example <http://www.bridges.org> and (van Dijk & Hacker, 2003; Warschauer, 2004).

teachers and principals along with numerous other specialists in the field. The interviews were all conducted in English, but in the Xolani Primary school⁶ an interpreter translated the communication that took place.

The schools, all being a part of the Khanya project, have certain things in common, but differ in the language of learning and teaching (LoLT) which is used in the schools. It should however be noted that this does not mean that in Eaglewood, the school where English is used as the LoLT, one will only find learners that have English as their home language. The same applies for the Afrikaans school, Acadia which does not only have learners who consider Afrikaans as their home language. In fact, the language profile of the schools is much more complicated and reflects the complex language and cultural profile in the province as well as in South Africa in general. The Xolani primary school as well as the Acasia primary school are for example dual medium schools and have classes both in English and - Xhosa or Afrikaans. See supplementary information in figure 1.

	Eaglewood primary	Xolani primary	Acasia primary
Grade 7 learners in total	260 Black, Coloured	892 Black	926 Coloured, Black
School fees per year	650 Rand	0	460 Rand
Language of instruction	English from grade one	Xhosa – supposed to be English from grade 4 but in reality more Xhosa	Afrikaans and English
Number of grade 7 classes	One class, 35 learners	Two classes, 99 learners	Three classes. 103 learners. 1 LoLT in Afrikaans, 2 LoLT in English
Home language of grade 7	10 English, 19 Xhosa, 2 Afrikaans	All Xhosa speaking	Afrikaans and English, few with other languages

Figure 1. Profile of the three schools

Eaglewood Primary School

Eaglewood is located in a small fishermen’s village in the southern outskirts of Cape Town. It has a total learner population of 260 pupils from grade 1 to grade 7. There is one class in

⁶ The names of the schools as well as names of those interviewed are all pseudonyms.

each grade and grade seven hosts 35 learners. The annual school fee is 650 Rand which approximately 70% of the learners pay; the rest contributes with a part of the amount.⁷

Eaglewood has a long history within the community and most of the learners come from a neighbouring township and a coloured settlement which was established after forced removals during Apartheid.

Many of the learners (or learners' parents) choose to come to this school instead of attending the local community school where all lessons are taught in their mother tongue as they prefer to go to a school with English as the LoLT. Parents, in particular black parents, are afraid that their children will lose socio-economic mobility and access to higher ranking positions in society if they are taught in their home language (Mda, 2004, p. 184; Nomlomo, 2006). In addition, Mda describes how many English and Afrikaans-speaking parents fear losing their languages, thus further downgrading other languages: "the implications that integration and multilingualism in schools may have for their children, play a major role in the marginalisation of African languages and their use as languages of learning" (ibid).

In the school only slightly more than half of all the learners have English as their home language, as 103 learners have Xhosa as their home language. When looking at the learners in grade seven: 10 have English as their mother tongue, 16 report they have Xhosa and two stated that Afrikaans is their mother tongue.

When it comes to software used at the school it is all in English. Compared to the learners in the other schools in my study, Eaglewood learners have more time in the computer room and are also invited to use the facilities during breaks for their own activities. The school has a computer teacher who is designated to be in charge of the room. This computer teacher arranges computer lessons for all the learners once a week which are integrated in whatever the learners have on the syllabus for that particular week. The learners use many different programmes and are by far the most computer literate of all the learners observed in the three schools. In addition to the Khanya package⁸ the school also subscribes to educational software from Computers4kids⁹. The class teacher accompanies the learners into

⁷ The school fees in the Western Cape vary quite a lot. According to the Human Science Research Council, the annual school fees in the Western Cape in 2005 were 700 Rand (HSRC, n.d.) The amount of school fees is an indicator of the socio-economic status of the learners/parents.

⁸ In the standard package for Primary schools Khanya provides (April 2007): CAMI (Maths/Perceptual/Diagnostic/Reader), Literacy Bank (Blue/Green/Brown), Circus 1,2 & 3, Rubricate, Fifi & Fritz, Microsoft Office and Encarta. Optional is Clicker, Inspirations (personal communication with A. Anjari 20. April 2007). The three schools focused on in this research do not have access to all this software. Xolani primary for example did not have CAMI up and running for a long time due to license fees. After the first year of Khanya setting up a computer room the school is responsible for the maintenance of licenses. The CAMI license is around 2800R annually.

⁹ See online <http://www.computers4kids.co.za/about.htm>

the computer room for mathematics and the use of the math programme, Cami maths. Five of the learners (16% of the whole class) said they have access to the Internet at home and as can be seen in Figure II, twelve¹⁰ of the 31 learners (38% of the whole class and 60% of the English mother tongue speakers in the class) who answered the survey have a computer at home even though two of them mentioned that it was broken and not operative.

Do you have a computer at home? (N=31)	Learners with English as home language (N=10)	Learners with Xhosa as home language (N=16)	Learners with Afrikaans as home language (N=2)	Learners with other languages (N=3)
YES 12 (38%)	6 (60%)	3 (19%)	1 (50%)	2 (66%)
NO 19 (62%)	4 (40%)	13 (81%)	1 (50%)	1 (33%)

Figure II. Access at home and mother tongue of 7th graders in Eaglewood.

Xolani Primary School

Xolani is located in Langa which is the oldest black township in Cape Town. Langa is considered as a relatively safe township and well established in comparison with other townships in the Cape Town area. Notwithstanding, the situation for many of the learners is poor and many live under difficult conditions, often with various social problems in their homes. The majority of the learners have Xhosa as their home language (892 learners), but 7 learners say their home language is English. The classes in the school are large and there are two classes of grade seven, each hosting 49 learners. The school does not have a school fee.

The computer use in grade seven is mainly based on Cami maths with occasional assignments in Microsoft Word. I experienced only one lesson where the class used the Internet during my six months period with grade seven¹¹. There is no software on the school server in Xhosa. Another factor limiting the learners' use of computers is that they need to share computers due to the size of the classes. The computer room has 24 computers providing learners with a computer/learner ratio of 1:2, thereby only allowing learners to log onto the computers and execute simple assignments. The use of software and programmes is restricted to basic things such as typing (slowly) and the learners experience difficulties in doing assignments in English, a language which they understand poorly. Most of the teachers

¹⁰ Half of those twelve i.e. six learners had English as their mother tongue.

¹¹ Despite attending the great majority of all the computer lessons during the six months of my fieldwork i.e. the explanation is not that I was absent when the use of Internet took place.

at the school do not have access to computers outside of the school. The majority of the learners also do not have access to computers nor to the Internet outside of school. Thirteen percent or 11 learners in the seventh grade report that they had access to computer outside of school and only four of them have access to the Internet.

Acasia Primary School

Acasia is located in Bellville, a predominantly coloured area in the eastern suburbs of Cape Town. The school hosted 839 students in the school year 2006-2007 with an additional 87 learners in grade R¹². There were a total of 103 learners in the three grade seven classes. Acasia has annual school fees of 460 Rand which is slightly more than the neighbouring schools. Until approximately ten years ago it was a solely Afrikaans school, but due to a growing demand from parents the majority of the classes are now taught in English. In grade seven there are two classes with English as the LoLT and one class with Afrikaans as the LoLT. The school has a seven day timetable which means that every seventh school day the learners are supposed to have one math class and one literacy class in the computer room.

The Afrikaans grade 7 class is able to use Afrikaans software; e.g. Cami maths and Cami reader programmes are available in Afrikaans. The learners in all the three grade 7 classes show good skills in using these two programmes in their respective languages. However they do not use other programmes or experiment with new software. Their use in the computer room is teacher led as opposed to learner centred. There are strict rules about the use of the computer room and it is not accessible for learners between lessons. When asked whether they have access to a computer at home, 59 learners (63% of all the 7th graders), answered that they did. Twenty-two or 23% of the whole grade 7 said they had internet connection at home as well.

¹² The pre-school class.

Figure III. Access at home and mother tongue of 7th graders in Acasia.

Do you have a computer at home? (N=94)	Learners with English as home language (N=33)	Learners with Xhosa as home language (N=8)	Learners with Afrikaans as home language (N=43)	Learners with other languages (N=8)
YES 59 (63%)	20 (61%)	4 (50%)	31 (72%)	4 (50%)
NO 35 (37%)	13 (39%)	4 (50%)	12 (28%)	4 (50%)

Why does the digital divide remain despite a progressive ICT initiative?

The digital divide has long been explained from the standpoint of having material or physical access to computers and Internet. Despite statistically improved access to computers in most places of the world, the emphasis has, in recent years, moved to other factors which also seem to have significant influence on the digital divide¹³. After having interviewing and observed the learners and teachers in different schools three factors became more apparent than others as the exploratory and maintaining factors of the digital divide and different computer competence of the learners.

The time aspect

It should not come as a surprise that the time the learners have to use computers considerably influences their computer competence. When it comes to access measured in time and frequency of use, the situation is poorest in the Xolani primary school. With large classes and computers that need to be shared, the time each learner has to use the computers is limited. In addition the learners from Xolani have much greater restrictions when it comes to access to computers outside of school than the learners in the other two schools.

The fact that the computer/learner ration is 1:2, means that the learners always have to share the computers unless the educator divides them into groups by having lessons for half of the class at a time. During the observation period I experienced this occasionally. In Xolani the sharing situation caused some frustrations and an uptight atmosphere in the beginning of

¹³ Many different definitions have been used for the digital divide. Here a view of a multiple approach is supported which does not only focus on material access but also includes human, digital and social resources as well as political will, laws and regulatory frameworks etc. See for example <http://www.bridges.org> and (van Dijk & Hacker, 2003; Warschauer, 2004).

the lessons. Although the learners also needed to share chairs they all stated in the interviews how they really liked having lessons in the computer room.

The teachers tried making the best out of the resources and time they had. However, there are different viewpoint on this as one of the educators in Eaglewood primary stated in an interview session: “the computer is an extension of the brain, how are you supposed to share it with another learner?” Whereas this educator would never let the learners share a computer, other educators pointed out how good it was for the learners to be able to use a computer together, to discuss the assignments and experience peer work in front of the screen.

At Eaglewood primary school every learner had two hours a week in the computer room, one with their class teacher and one with their computer teacher and in Acasia they were allowed two hours every seven days as the school week consisted of seven days model.

All the interviewed learners stated that they would like more time in the computer room, as they found it interesting and exciting to use computers. In Xolani and Acasia primary schools many of the learners mentioned that they would like to get more varied tasks in the computer room. Eaglewood primary school is however the only school using other software than the standard Khanya package. They subscribe to educational material from Computers4Kids which is developed by educators to practise different computer skills and integrate the use of different programmes into the subject matter of the curriculum. As noted earlier, the learners in Eaglewood get more time on the computers than the learners in the two other schools during their school hours.

One of the questions that I asked the learners was if there were some learners in the class that had better computer skills than the average learner in the classroom. The majority of the learners acknowledged that there were some who were better than others. When asked about the possible reason for that their answers were identical; those were the learners who had access to computers at home or elsewhere outside of school. This viewpoint was also supported by the teachers whom I interviewed. Other researchers, Facer (2002) and Selwyn (1998), have also pointed out the significance of home computers and how access at home supports learners’ digital competence at school.

The Teachers

One of Khanya’s main goals is to give the teachers access to computers as well as the learners as many of the teachers have never used computers before. The teachers were also learning how to use computers along with the learners which can explain that during my observation in

the computer classrooms some of the teachers were quite insecure when using them. In one of my early field notes from Xolani primary I wrote:

Thabiso came in with half of the class. He explains to me what he is going to do and in a way seeks acceptance for what he is doing. During the lesson he looks towards me to get my acceptance [...]. My stay in the room surely does not go unnoticed. I also notice that he is constantly using English. I wonder if that is due to my presence.

After several lessons Thabiso stopped looking in my direction when and started using Xhosa predominantly despite that in grade seven the LoLT is supposed to be English. Eventually the only English words that I heard in his class were phrases like “log on”, “save the document” and “log off”. In the only Internet based lesson I experienced a teacher, apparently with better computer skills than Thabiso, who came into the room and gave instructions (in English) on what to do. The learners were instructed to go online and find poems for Mother’s Day. Although it appeared to be a straight forward task, the learners had not experienced using a search engine and the lesson turned out to be quite chaotic. The learners experienced problems in finding their way online, their assignment was not clear and eventually the learners grew restless.

In Acasia primary school the lessons were predominately teacher led. The learners repeated after the teacher and followed the instruction on the whiteboard or from the software. Similar practises have been recognised by Prinsloo when he describes teaching practises through the medium of ICT in a township school in Cape Town. He argues that:

Children thus encounter ICTs in the context of the authority relations and pedagogical practices that characterise schooling in this setting. The enforced passivity of the children (for example, where they sat with their hands under the table while the teacher set up the lesson, and then followed limited procedures in mechanical fashion) is consistent with the way they were expected to behave in school, but contrasts sharply with the often declared potential of the ICTs for children’s experimentation, self-instruction and individual choices and creativity (Prinsloo, 2005, p. 93).

At Eaglewood primary school the computer teacher clearly used a learner centred approach. The learners had the opportunity to try many different programmes and experimented on their own and the variety in the lessons was impressive.

Addressing the issue of teacher insecurity, I specifically asked the teachers if they felt they received enough support and guidance when teaching with computers. Most of them

have received an “e-educators certificate” from Khanya after having been through their initial training programme. However new teachers did not get this training and had to count on the help of their colleagues or their own motivation to sit down and practise. Many of the teachers mentioned that it would be beneficial to have more support.

Through my interviews it also became evident that the same experience applies to the teachers as the learners when it comes to access. Teachers need practise and time to try out things and to increase their computer competence. If they do not use computers on a regular basis they do not feel comfortable enough experimenting with their learners. This can partly explain the extensive use of one or two programmes in two of the schools. As a case in point, the learners in Xolani primary and Acasia primary hardly ever used the Internet or any other software than Cami math and Cami reader. When I asked one of the teachers in the Xolani primary whether he ever allowed the learners to use the Internet he answered “no never, I tell them it is too expensive” and that is surely something the learners coming from poor homes understand.

In Acasia primary school I never saw the learners use the Internet during class. However one of the 7th grade teachers said he did allow the learners to use the Internet but added that they just wanted to play games. Another teacher in Acasia said they unfortunately had no time to experiment or do other things than Cami maths and Cami reader in the computer room. At Eaglewood, however, the computer teacher used the Internet as an information source as well as introduced many different programmes and features for the learners. Their interests was evoked in many different ways¹⁴.

The tongue

One of the first indications that the language in the schools was an influencing factor occurred when I asked the learners to answer my survey on computer use. I had the survey translated into the three main languages of the Western Cape: English, Afrikaans and Xhosa. Interestingly, the majority of the learners in the six classes chose to answer in the language primarily *used* at school and not necessarily in their home language or the language of teaching (LoT). This meant that in Xolani primary school all the learners chose the Xhosa version which was the language used most of the time in the classroom and also happened to be their home language. In Eaglewood, 27 learners answered in English (the LoT), two in Afrikaans (their home language was Afrikaans) and two in Xhosa (despite 16 in the class

¹⁴ This particular computer teacher had taken courses through the University of South Africa, UNISA in use of ICT in education.

having Xhosa as their home language). In Acasia, all but two learners in the Afrikaans LoLT class chose to answer in Afrikaans. In the two English classes all the learners answered in English except for one in Afrikaans and two in Xhosa despite the fact that 14 learners said their home language was Afrikaans and six had Xhosa as their home language. When I interviewed the Acasia primary school principal about this situation, he said “it is all a matter of terminology....in the classroom they get exposed to English words and terminology. That is why they also chose to answer in English even though their home language is Afrikaans”.

Reflecting on this, it appears to be a vast difference in the way the Afrikaans LoLT learners and the Xhosa LoLT learners view their language. Whereas the majority of the learners in Xolani primary stated that they had “no problem” in understanding English in the classroom, or understanding English instructions on the computers. In the interview sessions all of them chose to speak Xhosa after the first questions posed to them in English. When I first introduced the interpreter accompanying me I said that they would be asked in English and the translator could translate into Xhosa if necessary. They could answer either in English or in Xhosa. The ten learners that I interviewed in Xolani primary eventually all ended up speaking in Xhosa only. Looking in the field notes I wrote:

Interviewing all the ten learners in Xolani was an interesting experience. The interviews all started in English when I asked the learners their names and about their background. Quite early in the interview they started looking at Siphosethu [the interpreter], who took the hint and translated my words. Gradually each and every interview ended up as a dialogue between Siphosethu and the learners. My only contribution was to ask the questions, listen and eventually ask them to explain better when I did not understand Siphosethu’s translation.

It was obvious that the learners felt more comfortable with speaking Xhosa than English. This was also obvious in their answers when they were asked what language they use at school. Most of them said they used more Xhosa, especially during the breaks, but also in the classroom when they are doing group work. When listening in on their conversations in front of the computers, I clearly noticed that they were speaking Xhosa together. Occasionally they code switched and said a few words in English or in the math classes when they sometimes counted in English, but the dialogue between the learners as well as between the learners and the teacher was predominantly in Xhosa.

In Acasia all the conversations took place using Afrikaans in the Afrikaans LoLT class and the programmes the learners used on the computers was in Afrikaans. On the other hand, the Xhosa learners did not have a choice to use Cami math in Xhosa as the schools did not

have a Xhosa version of the software¹⁵. Many of my field notes indicate poor understanding of English and how the use of English confuses the learners and how the teachers need to repeat as well as to code switch and give further explanations in Xhosa in order to help the learners understand the assignments¹⁶. In a study by Monde Mbekwa on mathematical literacy in Western Cape High Schools he argues that:

what also contributes to poor performance [in mathematical literacy] is the English language in which Mathematical Literacy problems are couched. Most of the problems are verbal in nature and students find it difficult to make sense of what is required. Teachers have to spend a lot of time translating the language of the problem into Xhosa, their mother tongue (Mbekwa, 2007).

The situation Mbekwa describes is very similar when teachers are teaching maths and literacy through computers in the non English speaking schools in my study. In the Afrikaans class of Acasia primary school, the learners did not experience the same language barriers as the learners in Xolani simply because the educator, the learners, and the software were using the same language: Afrikaans. In Xolani, there was no software in use in Xhosa so my findings do not include comparison of the Xhosa speaking learners using English software versus Xhosa speaking learners using Xhosa software, which would definitely have added an interesting dimension to the study.

One of the most intriguing findings is that all the Afrikaans learners stated that they would use computers and the Internet much more if they could find more information in their mother tongue. In Xolani primary school, the answers were somewhat more diverse. Most of the learners did not want to admit that they had a problem understanding information in English even though it was clear that it was confusing for them to be taught primarily in Xhosa with some English added, having teaching materials in English only and using Xhosa only at home and in their immediate surroundings. The Xhosa learners at Eaglewood are in somewhat different situation as the school is located in a predominantly English speaking community. The learners hear English in the community and English is the LoT from grade one. At Eaglewood they also have a designated computer teacher and they get more time in the computer room than the learners in the other schools.

¹⁵ As a matter of fact, I was told by one of the Khanya staff that a Xhosa version of Cami came out in 2007 and therefore does exist. Its use is however not widespread yet.

¹⁶ Note that the learners are in the so-called dual medium school. They use Xhosa for LoLT from grade 1-3 and in grade 4 onwards they are supposed to get their LoLT in English. Subsequently all textbooks and other teaching materials for these grades are in English.

Concluding remarks

The emphasis on English in South Africa is closely connected to the status of the eleven official languages in the country. The former colonial and apartheid languages, English and Afrikaans, have much higher prestige than the nine African languages. As Mda correctly states:

During the colonial and apartheid eras, Afrikaans and English were defined as ‘languages’, while indigenous African languages were viewed as ‘tongues’ or ‘vernaculars’. While the term ‘language’ carried esteem, rights, recognition and privilege, the reverse was true for ‘tongue’ and ‘vernacular’. African languages were marginalised as languages of learning and were not usually used as such beyond the primary school. Through legislation and other means, South African languages did not enjoy equal status (Mda, 2004, p. 177)

Researching the connection between computer use and language in South Africa is challenging but is of utmost importance to understand how the new technology can be fully integrated into local situations and adapted to learners’ and teachers’ needs. Czerniewicz (2004) argues that despite the fact that the South African government is clear on the importance of fighting the digital divide and taking part in the new information economy, there is little attention given to it at the macro level. Van Audenhove et al. (1999) identifies the great challenge of building up the capacity of expertise and adapting technology to developing countries’ particular socio-cultural, economic and political environments. Additionally, increased awareness on the existence of new divides that emerge from the new and existent social divides around class, race, gender nationality and disability (Czerniewicz, Ravjee, & Mlitwa, 2006). In a South African context it would furthermore be greatly beneficial for the learners if more emphasis would be placed on the language issue.

In a report detailing access and use of ICT in higher education in the Western Cape it is stated that: “The view that ICTs are great equalisers has receded as the local realities and complexities of implementing ICTs in education in a diverse and divided terrain have become more evident” (Czerniewicz & Brown, p. 14). They continue by arguing that “we are astounded that the paucity of relevant local digital content is not considered a matter of concern, and that students do not bemoan their lack of access to suitable, locally produced contextually relevant content in the languages of their choice” (Czerniewicz & Brown, 2006, p. 136).

This is one of the reasons why producers of software do not emphasise translating or developing software in the African languages. English and Afrikaans, the two former official languages, are still so powerful that, “there are few incentives for non-African-language

speakers to learn African languages and for African learners to exercise their rights pertaining to their languages” (Mda, 2004, p. 183).

Ironically the Khanya project bears the Xhosa name meaning ‘enlightenment’ or ‘to let your light shine’ however it has very limited language software and computer resources in Xhosa. Positively, Khanya has focused on the former disadvantaged schools and has given learners in those schools an opportunity which they would not have outside of the school. Yet, the role that language plays in computer use has not been taken into account at all.

In the interviews conducted for this study it was often mentioned that the teachers themselves prefer software in English because it is “easier for them”. The learners however request more material, software and content in their own mother tongue. The findings demonstrate that the learners enjoy being in the computer room and are eager to learn but they want more time and greater opportunities to use the computers in different ways and in their own mother tongue. This was especially clear from the Afrikaans speaking learners, even though they have access to considerably more material in their mother tongue than the Xhosa learners. Moreover, the Afrikaans speaking learners have much better access to computers outside of school.

It should be the right of every learner to get the opportunity to learn and be taught in his/her mother tongue which would take South Africa a step closer to educational equality as is identified in their constitution. However, as long as there is limited localisation of content which does not take into account all the different languages, the status of English within South Africa will continue to have an upper hand and will continue to be a hindrance for the learning process and computer competence of all learners. In order for this to change a combined endeavour needs to take place, not only as an appeal from the learners. Educators, software producers and educational authorities need to work together to provide relevant and culture friendly learning materials in the local languages.

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