

2. Reflections on Cultural Imperialism and Pedagogical Possibilities Emerging from Youth Encounters with Internet in Africa

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ABSTRACT

Many academic and popular writers have warned that the internet could be another form of cultural imperialism used by corporate-led western powers to force feed western values and worldviews to the rest of the world, similar to how Western education was imposed on Africa after colonisation. These ongoing arguments about one-way flows of information that shape African minds in Western moulds reinforce desires for dominance and promote an attitude of victimization. Others perceive internet as a panacea to social problems without considering the context in which it would or could be appropriate. This paper draws on research undertaken in 36 primary and secondary schools in five West and Central African countries to look at pedagogical opportunities educators and learners bring to African schools as they use computers and internet in teaching and learning processes. We argue that if appropriated in reflective and creative ways, the internet can become a tool for affirming African values such as community and interdependence. In addition, the internet can be used by teachers and students to help develop critical attitudes as opposed to promoting individualism and consumerism, linked with Western values. Critical and emancipatory pedagogies are part of the process necessary to challenge structural phenomena such as profit-driven globalisation that impoverish, silence, exclude and limit creativity.

Keywords: internet – youth – education – Africa – cultural imperialism – pedagogical integration of ICT

Introduction

Culture is generally defined as the ways in which a community conducts its lives (Aidoo¹, in Tax et al., 1995). Culture matters because it is a way in which we connect with others and with our environment and take part in society. Imperialism is a form of domination that, in the interest of acquiring and preserving privilege and/or influencing global consciousness, can silence voices and crowd out the expression of alternative ways of being and doing. People in and outside Africa enthuse us into thinking the spread of internet in Africa will promote democracy and wider circles of belonging, while others warn that as a form of economic and cultural imperialism it will concentrate power in a few hands, particularly those of media giants and multinational companies, and shape the way we think and behave.

¹ in keynote speech at "Cultural Dynamics and Development Processes and Africa at the Century's End," UNESCO Conference, Utrecht, Netherlands, 9 June 1994

Instead of opening up spaces for sharing and learning encounters that could lead to new visions and realities, dancers with money and power often crowd others off the international dance floor. If space for dialogue and coming together is not ensured, they could find themselves continuing to monologue and dance with their own shadows, in predictable and potentially uncreative ways – ways that ensure access to the floor and power to dictate moves and ways that also silence other steps and thus abort new dances. Such dancing is a form of poverty and an impoverishing process for the global community.

For two centuries from the time of the slave trade (16th century) up to colonization (18th century), Africa remained under the diktat of certain forms of western military, economic and cultural imperialism, mostly French and English. Since the colonial period, Africa has been in an imported educational system which has shown its limits (Nyamnjoh, 2004).

At the end of colonization and the cold war, and particularly since the rise of new information and communications technologies (ICT) in the 21st century, a new world was born having every appearance of a global village with its stakes, its rules and its codes. New concepts such as globalization have emerged. In other words, the world is “one” just as it always has been since time immemorial. And internet, one of the components of these new technologies, appears as one of the key tools of this globalization, the showcase of the planetary village of our day. Globalization has turned education into a means of westernizing the world and this is a new form of cultural imperialism (Chinnammai, 2005).

The set of problems

Will history repeat itself with internet? Will it be another case of the sleeping mat of others? (Ki-Zerbo, 1992). Does ICT represent a real chance for the peoples of Africa to “promote their real culture, their real face?” (Mbengue, 2002)

Is internet a cultural danger for African youth or a chance to open the world so they may participate positively and fully, with all their strength and creativity in this new meeting place for exchanges as heralded by the poet of negritude, Léopold Sédar Senghor, champion of universality and cultural crossbreeding? This is the centre of interest of our scientific reflection on Africa and the integration of ICT in education.

In talking about Africa and the internet, there is a lot about connectivity and less about connecting with the real concerns of users and potential users. The issue of African participation in internet has been dominated by a technological approach to connectivity, focusing on infrastructure, which is indeed lacking. In this respect, several western cooperation projects have seen the light of day in order to connect Africa to the rest of the world through internet.

However, once the question of social appropriation of these new tools is posed, it is useful to sound out the sociology of development which has been asking questions for several decades about the failures and the impact of introducing a new technology in a given socio-cultural context. Far from being neutral, these tools influence and interact with the socio-cultural context in which they are inserted, and vice versa. To what precise need expressed by users do these technologies respond, or should they respond? Answers to such questions should make it possible, in the framework of initial analyses, to verify the relevance of using one tool rather than another, why and how, as explained by Pascal Baba Coulibaly, former Malian Minister of Culture (Dumolin, 2002).

Integration – a means of acculturation that differs from assimilation, separation and marginalization – as perceived by Berry et al. (1989) resembles a synthesis of two cultural

codes: that of the host society and that of the originating society. Beyond the synthesis, there is conciliation, even reconciliation of two poles of cultural allegiance. The synthesis is all the easier in that divergence is less marked between the values of the two cultures claimed by the same person. This set of problems highlights a test of strength between the two cultures which may be seen in the domination of one over the other.

This is why we have found it necessary to explore the problem of integration of ICT in African educational systems by questioning all the actors – men and women teachers, girl and boy students, parents of students, administrators – whose action can encourage or inhibit the process.

The research question and general hypothesis

Before exploring this far-reaching series of problems, it is important to know the perception of internet by the principal actors, particularly learners. Do young Africans perceive internet and the computer as a new form of imperialism, or simply as a means of learning, creating knowledge, and giving greater value to cultural diversity? In other words, do young Africans experience internet as another form of western domination? To reply to our research question, we formulate the following general hypothesis: young Africans think that culture is dynamic and that the marriage of cultures (Western or otherwise and African) via internet, although it may look like a new form of imperialism, constitutes a powerful tool for promoting scientific exchanges and improving the quality of teaching and learning in Africa.

Objectives of the paper

The main objective of this paper is to describe the perceptions of young African schoolchildren and their parents and teachers regarding ICT. It is also a matter of seeing if analysis of these perceptions reveals a certain continuity of cultural imperialism. Among other objectives, we aim to show that perceptions of ICT among young Africans is linked to history (slavery, colonization, imperialism), in so far as elements coming from western culture are always perceived as another form of domination that western culture imposes on African culture. We also have as an objective to show that effective integration of ICT in African educational systems depends in part on the perceptions and representations embodied by the principal actors.

In the presentation of the main themes that appear in discourse with youth and those responsible for their education in relation to our set of problems, we will hear why school actors integrate ICT and what the risks are in terms of dependence and elitism. We will learn whether internet is replacing teachers and what content students search for on internet. We will also learn how young people in schools are using internet to dialogue and construct knowledge across borders.

Methodology

It is in this line of investigation that we undertook a macro survey in five member countries of the Educational Research Network for West and Central Africa (ERNWACA), in order to identify the strong and weak points of ICT integration in African educational systems. The survey was explorative and descriptive in nature.

Users' perceptions of technologies come from transcriptions of interviews and discussion groups conducted in 36 private and public primary and secondary schools in Benin, Cameroon, Ghana, Mali and Senegal, ranging in size from 600 to 5000 students. The survey used a mixed methodology, combining qualitative and quantitative approaches, and

involved 66 000 students (girls and boys) and 3 000 teachers (men and women), in addition to parents and administrators. It was a first transnational effort in West and Central Africa to understand the points of view of school directors, teachers, students and parents on the use of computers and internet at school.

This introductory paper does not pretend to align itself strictly with the major methodological requirements imposed on any serious scholarly article. However, its serious nature resides in the fact that it is based on the perceptions and representations of ICT in Africa, founded on reports by the media and interviews of certain young African net surfers, all of whom live in the five ERNWACA member countries where the survey took place. We move from general discussions to, as recommended by Wood (1997), investigating particular circumstances in which technologies are used.

Internet for youth: a spider's trap or a web for friendship and knowledge?

Internet has crossed every continent to become part of the daily life of millions of people all over the world. There is talk of growth from 16 to 747 million net surfers between 1996 and 2007 (comScore, 2007; LeJournalduNet, 2007) and the possibility of that number reaching 1.5 billion in 2011 (Sehgal, Mulligan, Naydenova, & Peach, 2007). In Africa, it is estimated that, in 2006, there were 4.71 users per 1000 inhabitants (ITU, 2008), while it was estimated there were between 37 to 38 per 1000 inhabitants in the Americas and Europe (ITU, 2008).

If we look beyond the numbers, we see that in Ouarzazate (Morocco), Timbuktu (Mali), Dakar (Senegal), Bangui (Central African Republic) or Bujumbura (Burundi), internet cafés are now part of the urban décor. Over 75% of students attending schools equipped with computers in some cities have an e-mail address and surf regularly on internet (ROCARE/ERNWACA, 2006). In addition internet services such as electronic messaging, the web, chatting and skype no longer hold any secrets for these hip young African city dwellers. If the young rural majority (60 to 70% of African populations) fortunately or unfortunately has not yet met the perversions or the joys of the net, those in town have already made it a favourite pastime. But, what do youth in Africa today actually do with internet?

If we believe the media, more or less the majority of young Africans spend their time on the net playing video games, exchanging languorously with their girlfriends or boyfriends, looking at pornography and seeking out pen pals and visas to emigrate. But since not all of them are in the same boat, the media also informs us that some students use the net to search for educational resources and study bursaries.

The phenomena of acculturation is generally associated with immigration and therefore to the migration of individuals. It appears that internet brings a different dimension to this concept. In fact it is perhaps no longer necessary to emigrate to become the victim of acculturation. A switched-on Bambara from Mali can learn everything about a Breton living in France in a few clicks, thanks to the magic of the net: how to dress like a Breton, eat like one, even speak Breton, while never having crossed the border to enter France. With little Bambara contribution to the net, however, it is not certain that the Breton could learn as much about a Bambara. Just one example of one-way communication.

The net economy, a battle of wills

Cultural imperialism has not led to a homogenized, monolithic world culture but one in which diversity and tradition persist (Huntington, 1993; Inglehart, 2000). Certain authors use such findings stemming from research to justify ideologies and assert that capitalism and

American values have proven themselves "exceedingly efficient in giving society what it wants" (Rauth, 1988; Rothkopf, 1997).

For sure, business is taking a firm hold of the globalization process and internet development. The drive to capture virgin markets of developing countries can even reproduce and perpetuate the digital divide (Ya'u, 2004: 23-24). Many scholars purport that these trends limit the democratizing impact of the internet, promote a culture of consumerism and concentrate power and profit in the hands of a few (George, 1998; Khiabany, 2003; Main, 2001; van Elteren, 2003).

With convergence of telecommunications and computer industries to form an integrated global communication system, "six to a dozen supercompanies will rule the roost. And internet alone cannot slay the power of the media giants. Public service values and institutions that interfere with profit maximization are on the chopping block. [...] Consumerism, class inequality and so-called 'individualism' tend to be taken as natural and even benevolent, whereas political activity, civic values, and anti-market activities are marginalized" (McChesney, 2001; see also Golding, 2000).

Some of these observations and predictions are manifested by recent activities of the Microsoft Empire. At the World Summit on the Information Society (WSIS) in Geneva in 2003, Microsoft sent six representatives. For the 2005 Summit in Tunis, the company sent 70 representatives to sell their innovative solutions to UN agencies, governments in the south and NGOs carrying out development projects (Chakravartty, 2006: 255). And UNESCO, apparently abandoning promotion of free software, signed an agreement with Microsoft and contributes to reinforcing this multinational's commercial penetration in Africa and dependence on a provider with quasi-monopoly status. This agreement incites us "to perceive software as a thing that we buy rather than something to be constructed, as an industrial product rather than a cultural technique that deserves to be taught and shared" (Da Silveira, Sibaud & Couchet, 2005).

Adésinà (2006) argues that to "rethink" development, we need to connect the dots between development, debt, aid dependency, and the retreat of the public domain and the dissonance between regional development objectives and current trade regimes. He goes on to say that "techno-talk" can be fatal when it diverts attention from underlying structural issues that recreate perverse growth and inequity and imprison and impoverish.

Do foreign technologies make sense for Africa?

In his article "Can ICT belong in Africa," van Binsbergen argues, contrary to Heidegger who claimed that technology is by its essence perpendicular to any change, that "ICT constitutes a central element in everything we call culture" and that, for many, computers and internet are "imagined" as being foreign or coming from outside even though the place of origin is far more continuous with particular communities than we let ourselves imagine. What appears as "alien" becomes part and parcel of culture through appropriation (van Binsbergen, 2004: 115-120). "The borders of our diverse identities, subjectivities, experiences, and communities connect us to each other more than they separate us and ... how we theorize those connections as a force of tension, domination, and emancipatory possibilities is a difficult task" (Giroux, 2005: 7). Persistent disparity in power between the West and the non-West informs structures and links imperialisers and the imperialised; interpretations sometimes conceal how much the "stronger" party overlaps with and depends on the "weaker" (Said, 1993: 191-94).

Appropriation of an innovation involves re-inventing it in the new context “rather than doing a parrot-like mimicking.” Innovation is an indispensable motor to help nations and cultures adapt to changing realities (Muchie, 2004: 318, 329). Policies that undergird innovation and the integration of ICT into education should be informed by national realities, however “[i]n contexts where policy environments are underdeveloped ..., there is danger of research being over-reliant on exemplars from other countries in the region or further afield ... [and] in culling ideas uncritically from other contexts” (Dhunpath & Paterson, 2004: 141). The process requires mobilization of “African’s own initiatives, resources and possibilities” (Muchie, 2004: 330).

Providing Africa with a face on the net is fundamental to the utility and relevance of internet in Africa. And that cannot be done without local cultural participation that contributes to the balance of cultural relations (Ntambue, nd).

Local appropriation of ICT is a process where communities and groups select and adopt communication tools according to their different needs and then adapt the technologies so that they become rooted in their own social, economic and cultural processes. The process reflects creativity and freedom of expression and, in some cases, resistance to political and cultural dominance by global media markets. (as adapted by GKP, 2002: 19; from work by Michiels & Crowder, 2001)

Understandings of appropriation informed by media studies and cultural studies have described the process as a resistance to domination and as affirmation of new and creative cultural expression. Educators cognizant of the force of power at play in the world, informed by cultural studies, critical pedagogy and drawing on work of Paulo Freire, explain that if education is to be a resource for a process through which people become subjects of their own experience, pedagogical practice must address not just acquisition of skills and knowledge but also the "development of resources within which people can begin to challenge and transform" structural relations (Simon, 1992: 19). There must be "new ways to forge a public pedagogy capable of connecting the local and the global, the economic sphere and cultural politics, as well as [...] education and the pressing social demands of the larger society. At stake here is the possibility of imagining and struggling for new forms of civic courage and citizenship that expand the boundaries of a global democracy" (Giroux, 2005: 6).

Interviews with school directors, teachers, students and parents in five West and Central African countries revealed both possibilities for domination and for active pedagogies inherent in the ways computer and internet are being used in schools. There is evidence that school directors, teachers and students are beginning to harness internet, not as a panacea to educational deficits, but as one of a multitude of spaces for learning and one with transformative potential. "African children are active agents in ongoing processes of simultaneously modernizing African traditions and Africanizing their modernities" (Nyamnjoh, 2002: 11).

Why are some African schools integrating ICT?

School directors, when asked why they were integrating ICT responded that they wanted to open up new horizons and provide new pedagogical opportunities for their students and teachers. They explained how they had used ICT to improve school administration and said how internet could help overcome lack of services like a well stocked library or a laboratory.

Parents easily adopted modernist discourse when explaining why they wanted their children to use technology. The "world is moving and we have to be abreast." The "world is a

global village, new things are happening, developments are going on, so we don't have to get back to the old notes." Students explained that knowledge of the computer is a ticket to studying abroad or getting picked up for jobs. "Nowadays when you don't have knowledge in computer you cannot go anywhere."

It's almost like an obsession, at the onslaught of the 21st century to "inhabit the new dawn" fostered by the spread of ICT (Golding, 2000: 166).

Partnership and risks of dependence and elitism

Many schools see parents as primary school partners, even if the school is in partnership with others in relation to integration of technologies: former students, the municipality, an NGO, an overseas school, a private company. Government was cited as the last partner as most governments were still in the process of developing policies about ICT integration in education at the time of the study. Some NGOs provide equipment and training and help schools on the path toward sustainability while some external companies bleed finances from the school for years for equipment, maintenance, software and configuration, internet and teacher training. We heard of "companies that frighten and cheat headmasters." Tchombe (2006) noted that teachers tend to be dependent on the director of the multimedia centre. A technology teacher explained to us that "the director of studies can't even control me like he does other teachers." The ICT lab monitor can become an imperialist in his own right.

A school director explains that the parents see integration of technologies "in a very positive light, because working with a computer today, particularly at the elementary level, that is an opportunity that no other school offers." Many believe that the computer will solve all problems, and with only this, they are happy that their children are in a structure that has equipment of this kind. As Josie Arnold in her paper on "English as the Global Language" puts it:

We have come to believe that we somehow know the stuff because we can connect to the internet and get instant information on almost any topic. While gaining information may be easy, gaining knowledge is much more challenging, and making that information and knowledge into some form of wisdom is extremely challenging indeed. Perhaps we have even come to believe that we exist because we can use the www to express ourselves (Arnold, 2006: 1).

In a very elite school in Ghana one mother explained how she is "moving heaven and earth" to get her ward a computer so he can get whatever it is he needs so badly from it. One student notes that "in some schools the students don't have the chance to have one."

Parents explained that "the fact that maybe you are schooling in the rural area for instance shouldn't be an elimination for you in terms of access to information so if the government would go forward to put ICT in its priority areas we would advocate that they go ahead to ensure that this program is well taken especially in the rural areas. If you just equip schools in the urban areas leaving those in the rural areas then you will be doing many of our children harm. These children will become leaders in future so they must be equipped with such information."

Teacher training and research

"The computer itself is not revolutionary, it is the way we use it that can have this effect. But the drama is that the teachers are not trained," explains a teacher. In response to such an observation, Fonkoua (2006) advocates introducing the pedagogical integration of

technologies into teacher training programmes. He warns us of the risk of possible “disqualification of teachers who are not able or do not want to go down this road” (p. 231). Research-action-training as a method will enable education researchers to move beyond the simply pedagogical point of view and bring a “more global vision” that will take into account representations, expectations, cultural factors, etc. (Peraya, Viens, & Karsenti, 2002: 261).

In societies full of multiple narratives, new literacies need to include expanded understanding in which students “experience and define what it means to be cultural producers, capable of both reading different texts and producing them, of moving in and out of theoretical discourses but never losing sight of the need to theorize for themselves” (Giroux, 1994). Teachers motivated and trained to use ICT can use it to help learners engage with texts at multiple levels and develop and question discourse about the ways of the world.

Does internet replace teachers?

Students insisted on how internet complements what teachers provide. “Now we have teachers and computers that help us to learn.” Internet “helps me understand the teacher’s explanations better.” “We improve on the knowledge received in class.” “You can get more detailed information about courses.” “In class the teachers only say the bare essentials. With computers not only are we able to test our knowledge, but we can understand better because classroom explanations are not enough.”

Most teachers also insisted on the complementary nature of internet as well as educational CD-ROMs and the teacher who can reply to subtle questions. One teacher explained how “a couple of months ago I asked my students to go and explore grammarbook.com. Some came back to tell me they actually went there and it really helped them, you know, understand some of the things I have been teaching in class.” But other teachers and lecturers are anxious about their own fate: “there are students who you can see have developed so much after their research, to such a degree that they are liable to outdo the teacher.” Other teachers reply, “Yes, that means that the teacher also has to get good information.”

Changing relations between teachers and students and with knowledge as well as the growing confidence of students, brought about in part by use of information-rich interactive technologies like internet, suggest changing pedagogical environments and new ways of constructing knowledge. Internet use contributed to increased motivation and curiosity about learning among youth and also to taking an active role in the process.

Are all contents suitable?

One student explains that in history “we often have difficulties in finding exactly the information we need. For example, one time I was looking for information on African participation in the Second World War, but all I could find was information on the war, nothing about the subject I was researching.” A woman teacher in Mali finds it ironic that the school possesses mainly English language educational software, while the students are translating everything in their heads from Bambara to French or vice versa.

It should be noted that, particularly for schools without internet, the Encarta Encyclopaedia on CD-ROM and Encarta Africana, products of the Microsoft multinational software developer did for some time become a primary resource for students to learn about “division of cells” or “the Palestinian problem” for instance. Students explain that “if you want to do someone’s biography, say, that of President Senghor, you go to Encarta, you

type Senghor, and you have everything.” Others explain that “I can find Wole Soyinka’s biography, but not his works.”

Teachers talk of adaptation. On internet there are lesson plans, “but sometimes they do not correspond to what we are doing. We adapt them to our needs.” Another teacher shares this opinion: “Some of the contents are not adapted. I think we have to adapt them to our context. I also think we should revise our programs, we should adapt them.” A school director explains that “it is the whole educational policy that should be revised,” from teacher training to the programs.

We also need to produce content “useful to our people and relevant to our development needs; but such content should also be capable of representing Africa’s cultures in an authentic manner and be in a position to counter the homogenizing tendency that globalisation promotes” (Ya’u, 2004: 27), yet “content is increasingly controlled by companies of the former colonial countries” (Ya’u, 2004: 26). Some scholars suggest that this represents a trend for non-endogenous control of education in Africa and constitutes a foundation for cultural imperialism (Ya’u, 2004:18). ICT, like other innovations, create spaces for external influence. This can translate into an extraversion in planning and programming and in training provided, that clashes with the objectives of the national educational system (Seck & Gueye, 2002: 17).

Several teachers make appeals not just to adapt but to create appropriate content. “I think that at the Ministry of Education, they should be able to elaborate software based on the Malian program.” “We have to put forth effort for our context, taking into account all factors that respond to our realities.” “We need ... production of content for ourselves ... particularly with regard to our specific problems. We the users, if we put something together ...”

Men and women teachers and parents insist on the need to create content for the contexts that their children live in:

On internet there are several educational sites. For these sites, there are realities that are somewhat appropriate. There are others, too that are not appropriate and are nearer to western realities. If we could conceptualise sites that would belong to our reality, we would find ourselves in them much more easily, and we would be more comfortable.

We ought to make our own participation because we are talking about globalization. If we don’t chip in our small contribution, we will be swallowed up, we won’t exist anymore.

Those who are not carrying out research will only consume a few things established elsewhere. This will always pose great difficulties for us, particularly regarding conceptualization of our learning. It is perhaps similar to the first books to arrive in Africa – not so adapted to our context – and ... we are in danger of falling back into the same situation. Our children are confused, so we must work and create for our own contexts, and thus create our own expertise.

Attempts to develop digital content are underway in specialized institutes such as ITSE in Yaoundé, Cameroon (Fonkoua & Amougou, 2006), and by some teachers themselves. Pedagogical advisers in Senegal are developing content and putting it online after school visits, to respond to gaps identified by teachers. The Cerco project, a school in Benin, has placed the national program on its digital campus. Cerco even stores audio messages on the performance of each student on their servers in national languages. Parents may access the messages related to their children by phoning the server with their cell phone.

Students told us that “we should not have access to certain sites that are unsuitable for minors: stuff like pornographic sites. / There are also sites that propose easy money, which is not always true; they are generally scams. / Erotic sites should be removed.”

One parent, talking of her daughter, indicates like others that “certainly there are things that she hides from me because we don’t visit the cyber café with her. You know, there are a lot of things to see, but we give them advice.”

What are schoolchildren looking for on internet?

We have already made reference to youth use of internet as a pastime. When it comes to schoolwork, how are they using internet? Consulting the Web as a complement for courses is a reflection of the school program and of the teachers’ familiarity with internet.

Students surveyed stated for instance that they consulted internet to find information about the history of Mali, about heroes such as Kwame Nkrumah, the Senegalese wise man Kocq Barma Fall, the poet David Diop, “all the players of the Cameroon national team before 1980 as well as the life of our former president,” the South African economy, etc. Students also consult information on “the war going on in Irak,” the slave trade, the school system, volcanoes, William Shakespeare, Martin Luther King, Leonard da Vinci who painted the Mona Lisa and the names of the disciples of Jesus Christ. “This Chinua Achebe’s *Things Fall Apart*, after reading the book, you just go and read the summary on the net, and then you suddenly feel like reading the main book a hundred times (laughs).” Prominent women were missing from lists provided by students on what information they seek out on internet.

“If you research Tabaski (Eid al Adha), you don’t just type in ‘Tabaski festival’ because the Tabaski festival is not only celebrated in Senegal, so you put ‘Tabaski festival in Senegal.’” One girl student explains: “Some time ago, there was talk about development in Africa. I went on the net to find information about that. I learned that the real wealth of a country is its human resources and its will to work.”

In “biology we look for information on the human digestive system.” Also, “if you’re studying accounting and you don’t have the Frank Woode and you know the website, you can go there and copy some questions, print and learn.” A teacher explained, “When I gave the lesson on contraception, I took the course and the diagrams from the net. The students understood that it is universal and that there is no taboo.”

While students regularly consult other sites, they also know the sites relating to their own country. For example: www.examen.sn, a site to help prepare students for elementary and high school exams in Senegal and, for “information on the political life of our nation, www.govghana.com. A teacher explains that in history/geography lessons in Benin, when studying environment, students found “information on the Benin Environmental Agency of the Ministry of the Environment, Housing and Town Planning (ABE-MEHU) as well as on other structures and initiatives that they found themselves. But you can rest assured that they brought in very good information to ensure this course was well conducted.”

Building knowledge by dialoguing and crossing borders

The site for "school" learning has expanded beyond the school itself with the integration of internet, bringing aspects of a larger world into the school for discussion and taking classroom discussions beyond the walls of the classroom. The school is also brought to the world to some extent via internet-facilitated exchanges between schools in Africa and schools in Africa, Europe and North America. Teachers and students participate in thematic

extracurricular learning circles and inter-school quizzes, some sponsored by the Global Teenager Program. Teachers and students alike seem to enjoy sharing their own knowledge and culture and learning from and about others through these exchanges.

Some schools, especially primary schools, have developed interdisciplinary school projects integrating local knowledge and the use of ICT. For example, a project about water involving the study of chemistry, aquatic life, and writing of essays based on interviews with elders about the legends and lore surrounding a marsh in the community (Kalanso, 2006: 8). The director of a school in Joal, the birthplace of Senghor, explained that, as students explore internet, they also discuss local values and cultures, especially as members of the community are invited regularly to address students on a variety of themes.

Good teachers, with support from head teachers and principals will figure out good ways to use internet as a pedagogical tool with their students. Internet will not however make teachers into good teachers, even if it has the potential, in combination with training and creativity in a supportive environment, to open possibilities for more active learning and teaching methods.

In the five countries where the research was conducted, we noted that internet research involves dialogue and negotiations outside the net. Between students and teachers, there is a pooling of new information to update knowledge. High school teachers state that students no longer hesitate to approach them in the courtyard to ask questions about the internet sites they have visited.

It should also be noted that the way of teaching today “is not the same as what used to be done. Before, everything was dogmatic, but now we teach children skills, the child has to be able to take responsibility for him [or her]self. Without having the teacher in front of him, he can learn lots of things.”

The teachers seem convinced that this socio-constructivist approach to knowledge contributes to students understanding better their lessons. “Perhaps there’s less ... what do you call it ... memorization or learning by heart the courses that the teacher gives in class. I think there’s ... a better understanding ...of themes.”

The perception is that the teacher is changing on his or her own initiative, and integration of internet into teaching is somehow contributing. When asked how using the computer and internet changed his/her teaching, a teacher responded, “I think the teacher is no longer the ‘encyclopaedia’ who delivers his knowledge to passive students ... he becomes much more of a facilitator, a facilitator of courses, of themes, of knowledge, and above all a moderator of debates.”

In contexts of schools where teachers are less supported and monitored pedagogically, it appears that in order to respond to the requirements of “the new program,” teachers send their students to cyber cafés, to “do research,” to “glean information and copy it down,” but without prior orientation on learning how to sift and manage information. “I’ve sent my children to do research on the civilizations of English-speaking countries.”

This practice can encourage automatic approaches rather than critical thinking and reflection. Young people can perceive the computer as a machine for automatic information processing. “What I really like is that the answers appear on the screen automatically.” “We like the quickness and efficiency with which the computer processes our problems.” “It is just a matter of typing what you want and it comes out automatically.”

So teachers as well as parents complain that internet “kills thinking and makes students lazy.” “Many students have lost the taste for reading; they prefer to do everything

by machine." "Young people can no longer solve mathematical problems in their head. They no longer know how to write."

The teacher has to face the facts about the relevance and logic of his or her pedagogical practices. With internet, the student is more motivated to carry out research. But the teacher has to accompany him. A teacher explains that "we no longer have the child swallow absolutely anything. Although at one time the teacher was used to filling them up, this is no longer possible today." A director adds that "the teacher has to be very careful. He knows he has learners sitting in front of him who know the tool that they operate with dexterity and sometimes outside school. So, you have to be very careful what you tell the children."

As researchers, we were witnesses to reflection on practice and evolution in behaviour associated with the presence of ICT. In the face of these changes within schools – greater interest and participation on the part of the student, and calling everything into question on the part of the teachers – we wonder if they can contribute to more committed and responsible citizenship. The question goes beyond our current project, but fieldwork has obliged us to ask ourselves the question. Are students who use ICT in a sustained manner to help them construct their knowledge today liable to become informed and active citizens in a more democratic society tomorrow?

Conclusion and recommendations

Many Africans are bitter that their outlooks are coloured by other cultures to the point where they "loose touch" with their deepest values and desires, yet return to pure authenticity is out of the question (Nyamnjoh, 2005: 1) and isolationism is not an option (Ya'u, 2004).

Cultural values are dynamic and constantly informed and reshaped. African values of sociality and solidarity, conviviality and community, brought to bear in colouring encounters with internet access and content development could ensure socio-cultural relevance, but internet itself will not change the curriculum. Inter marriages between existing ways and new ways can create spaces for new and creative dances.

ICT provides pathways that connect, pathways to facilitate domination, and pathways to freedom. With the integration of ICT in teaching-learning processes, opportunities for technological and cultural imperialism loom on the horizon (Fonkoua, 2006) as do pedagogical possibilities. ICT provides an environment for inquiry-oriented pedagogy that "content-thin textbooks and limited libraries" in Africa could not sustain before (Tchombe, 2006: 42). Didactical material, however, developed by Africans for Africans and others is rare while Microsoft's Encarta encyclopaedia on CD-ROM is commonplace in schools in West and Central Africa and often serves as a "first source" in research assignments. There is a fair amount of dependency in the integration process. Teachers depend on multimedia centre monitors (Tchombe, 2006) and in early stages schools depend on external ICT specialists. There is still a steep learning curve during the initial phases of access and little government support. Schools can loose important sums of money to external partners not particularly preoccupied with contributing to the conditions for autonomy.

Access to technology is far from equitable, especially in rural areas of Africa where electricity and telephone are scare. If unchannelled or badly channelled, ICT can lead to inertia and passivity or non-productive, even destructive time spent in front of the computer screen (Azonhe & Lodjo, 2002; Fonkoua, 2006; Ndoeye, Dione & Kane, 2002; Noudogbessi,

2002). There is also the risk that teachers who do not integrate ICT and adopt lifelong learning strategies become unqualified (Fonkoua, 2006).

The main recommendations from current research on the integration of ICT in education in Africa (i.e. Chisholm, Dhunpath, & Paterson, 2004) include firm national policy for access; teacher training and strategic partnership management; teacher initiative and involvement; and the development of content. Researchers also call for work on the theoretical framework for integration of ICT in education in Africa so as to advance reflection and support practitioners and policymakers in meaningful integration with widespread impact for educational reform and quality (Tchombe, 2006).

Pedagogical renovation is on the horizon and thus the need to prepare learners psychologically to enter a virtual world, prepare teachers for the changes that await them, and prepare educators to develop digital pedagogical materials that respond to societal needs (Fonkoua, 2006; Fonkoua & Amougou, 2006).

It is not just by importing and using computers that we can positively impact culture, economy and the knowledge society. Accompanying and interrelated efforts like teacher training and public sector investment in education and in higher education research and development are indispensable. These will help build local knowledge and prepare people to enliven and animate the process in coherence with community aspirations, as opposed to just getting trapped in acquisition and in mindless and soulless consumption patterns that may encourage disregard or disdain for local, national, regional and continental cultures.

Internet provides youth with opportunities for interaction and inter-linkages. Those inter-linkages can be ones of domination and consumerism or ones that are interdependent, creative and imbued with the richness of African cultures. It is not computers or internet that will enrich learning or provide employment opportunities for youth but the way in which we appropriate them. As we embrace the spider's silken Web and weave links that shape the nature of our networks, we should consider what we value (Carchidi, 1997: 1 & 4), for our Web will be a reflection of our lives and worldviews.

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