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African libraries as centers of e-learning

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Abstract:

The LATINA Lab is a training and development unit for e-learning at the Learning Centre and Library of Oslo and Akershus University College. This year we cooperate with Makerere University Library in Kampala, Uganda, to run an intensive two week workshop. This will enable the library to offer similar types of training and educational development based on their own resources. The paper summarizes what we have learned from LATINA about libraries as centers of e-learning, with Makerere as a concrete case.

Keywords: e-learning, digital libraries, East Africa

In May 2012 Benin organized the 7th regional conference on elearning in Africa. The convenors noted that *eLearning research, knowledge sharing, learning through practice and continuous monitoring and evaluation* had increased in recent years. Schools and universities show signs of improved practice. But elearning is still at an early stage of development, not only in Africa, but in the world as a whole. The convenors asked how elearning could support t*he management of change, including rapid and disruptive change:*

- *What are sustainable planning methodologies for eLearning projects?*
- *How do eLearning plans consider change management?*

- *What are the sustainable challenges experienced by scaling up eLearning initiatives?*
- *What conceptual frameworks and emerging theories are we drawing on for the design of sustainable eLearning programmes?*
- *Would such frameworks apply in varying contexts in the economies of both developed and developing countries?* (eLearning Africa 2012)

This paper describes a project that tries to answer such questions. In LATINA we see elearning as a process that involves new technologies, new teaching methods and new pedagogical concepts at the same time. We work with students, teachers and organizations that want to adapt their educational practices to the overwhelming presence of the Web. We see organizational change is an essential part of the process. LATINA stands for *Learning And Teaching IN A digital world.* We started giving courses in 2008. We are based in Oslo, but work with international groups of students and conduct our training in English. A link to Africa was present from the start. Three participants at our first course came from Upper Nile University in Malakal in South Sudan.

This year we are doing two summer courses, one in Oslo and one in Kampala, at Makerere University Library (Mulib). The Kampala course will have participants from six countries in East Africa. We will also assist Mulib in setting up a digital training unit at Makerere University. The main purpose of the project is to enable the library and other African participants to offer similar types of training at their own institutions in the future. In this paper I will try to sum up what we have learned from LATINA about libraries as centers of e-learning, with special reference to Uganda and East Africa.

Disruptive technologies

Universities are moving from a world based on paper to a world based on digital technology. The first step is **replacement**: word processors replace typewriters and e-mail replaces letters. Lecturers accustomed to overhead projectors now use video projectors and Powerpoint slides. At this stage, writing, communication and presentation speeds up, but the organization of work remains the same as before. The second step is **separation**. Special rooms called computer labs are set up. Separate periods for working digitally are included in the class schedules. Separate persons are employed to teach data subjects (data instructors, ICT teachers). Separate departments are established to service the digital network (computer sections, ICT staff). The teaching and learning environment is, in other words, split. In the traditional areas, teaching and learning go on as before. In the digital areas, new ways of working are tested and applied. The old and the new coexist, side by side, in separate rooms. Mental, physical and organizational boundaries keep teaching and technology apart.

The third step is **integration**. Portable devices, like laptops, tablets and smartphones, are introduced. All teachers and all students have their own personal computers. Web access become available everywhere and at any time. The web offers a vast range of educational materials for study, experimentation and virtual field trips. At this point, the forms of education start to change. Digital media replace paper media. Teachers and learners develop digital forms

of work. The transition is often turbulent. Economists and historians speak about **disruptive technologies**. Firearms destroyed the role of mounted knights. The typing press created the first mass media - books and pamphlets - and undermined the position of illuminated manuscripts. Steamships killed the clippers. The Big Switch - electricity - transformed life at home and work. ICT is equally disruptive.

The actual process of change can be quite painful. The introduction of new training methods in higher education is a complex and difficult process. But we believe, from experience, that libraries may have more freedom to experiment than ordinary programs of study.

The LATINA laboratory

The LATINA laboratory is a training and development unit for e-learning that is located inside a library. The library in question belongs to *Oslo and Akershus University College of Applied Sciences* in Norway. Its official name, the *Learning Centre and Library*, reflects its interest in the educational process. Four years ago, the College organized its first Summer School. The three week program was aimed at international students. The experimental nature of the School gave us a chance to try out a new approach to teaching and learning. Three of us joined forces and designed an intensive, production-oriented, digital training course for people who wanted to explore the educational possibilities of the web. That summer we did our first LATINA course, with participants from China, Africa and Europe.

Since we started in 2008, the Lab has gathered broad experience with library-based training in e-learning practices. We have taught courses lasting from one week to a full semseter, to international classes of librarians, library students and university teachers, in Oslo, Finland, China and Palestine. A second link to Africa was made in 2009, when the director of Makerere University Library, Dr. Maria Musoke, visited Oslo and the LATINA/Lab. She decided to send one of her senior librarians to the summer course. Three more followed in 2010. The training was appreciated (Namaganda et al., 2011):

> - *Mulib librarians have attended information technology courses like the LATINA course in Oslo – and these courses have been instrumental in applying the acquired skills in their library activities. For example, librarians in Africana section have created and continuously updated the Mulib album in Picasa, updated the User education slides, created the OPAC video tutorial in YouTube. Most interesting was a photo story generated from the pictures of branch Libraries that was uploaded on youtube.com.*

The LATINA course in Uganda forms part of a much wider process. Libraries and universities are changing throughout the world. New practices are spreading through many different channels. We are simply adding water to the flood. At LATINA we emphasize close and practical collaboration. Four instructors are coming from Oslo. Four instructors are Mulib staff who participated in the Oslo course in 2009 and 2010. Additional resource persons from Kampala will also join the course team. A high ratio of instructors (10) to students (30) encourages deep learning processes. Knowledge transfer within the staff group is also crucial.

LATINA integrates libraries and elearning. The team behind LATINA consisted of Helge Høivik, Lars Egeland and the author (Tord Høivik). Helge, who happens to be my brother, and I have experimented with digital approaches to teaching since the early nineties. I say experimented, since the institution as such has not integrated e-learning into its normal program of studies. We have both worked as library teachers, developers and researchers for many years. Our colleague Lars Egeland, who directs the college library, wanted to give the *learning centre* a broader strategic basis. A capacity to conduct and develop e-learning courses by the library itself looked promising.

The LATINA approach is not lecture based, but centered on student, group and production activities. The Lab develops, demonstrates and provides intensive training in teaching and learning methods that are based on the current state of – and emerging trends in – user-oriented ICT. We stress teamwork between teachers as well as between students. We generally use software that is free and widely used. Our work is web-based, cloud-based and multimedia oriented. We access, produce, edit and curate resources through a variety of devices, such as portable computers, touch tablets and mobile phones. The materials we develop before and during our courses are normally published on the open web with a CC license. And we are solidly planted with an academic library.

LATINA-in-a-box

Today, all schools and universities take the technologies of paper, print and writing for granted. We feel that education needs to integrate the web in a similar way. In countries with fast and stable web connections, immediate access to the web is the normal situation. The courses we have held in Norway, Finland and China could take the web for granted. In most of Africa, that is not the case. Access is expanding rapidly, particularly through mobile phone-based services. But for the next five or ten years, we need an approach that allows us to use the tremendous resources of the web under less than ideal conditions. The course in Kampala will therefore be based on what we have called *LATINA-in-a-box.*

This means that we store all course materials, as well as a multi-user blog program (WordPress), on a small portable server. We set up a local hot-spot, putting a wireless router on top of the box, so that students and teachers can utilize the resources on the server with normal digital tools (portable PCs, tablets, smartphones). Since web access will occasionally be available, we are not isolated from the web. We can download from – and upload to – the web from time to time. That means we can continue to work in a web-based manner – in Kampala, in Uganda, and in most of Africa. As part of our development work, we try to design learning resources – text, pictures, video – so that they will work on many different devices. Learners, students and practitioners will have access to information and communication in all their activities – on and off campus. What this implies for – say – school librarians, village teachers, field workers and local nurses can be imagined. Since equipment prices have fallen radically the last couple of years, this approach will not be more expensive than traditional desktops and servers – rather the opposite (Kasumuni, 2011).

Digital education

Our schools and universities have been designed to combine the spoken word with printed and handwritten resources such as books, maps, posters, notebooks and blackboards. These resources belong, we may say, to the Gutenberg Galaxy. The learning and teaching resources based on print and paper have been developed to a high level of perfection during the last five hundred years. They constitute a very rich and also very familiar environment, in Africa as well as in Europe.

Today, we also have access to a different media environment. The World Wide Web is only twenty years old. It is already extremely rich in learning resources. But these digital resources are often less developed, less stable and less formal than the printed materials we are accustomed to. The new environment is more fluid and less familiar than the old. Young people have never experienced a world without the Web. They take the culture and the services of the Web for granted. Most teachers, however, feel more at ease with Gutenberg. That is the world they grew up in. That is the world we were trained to master.

Today, or in the near future, we will be surrounded by the Web wherever we happen to be. Web access will be part of our life styles. In Africa the trend is towards link-up through mobile phones and phone-based modems rather than cable. In urban areas, public access through internet cafes, and possibly libraries, are likely to play a greater role than in the West. We see similar patterns in large parts of Asia and Latin America. Wireless networks expand much more rapidly than cables. At the Benin conference, mobile learning (mLearning) was a central topic. The normal bandwidth is generally lower in the South than in the West. The speed of access is increasing, of course, but the South is likely to lag behind the West for the next 5-10 years. When we plan for e-learning in Africa, we need to keep these material and social conditions in mind.

Horizontal communication

The Gutenberg Galaxy is dominated by the printed word. Photos, maps, diagrams and tables are more difficult to produce, and tend to be treated as supplements to the verbal texts. On the web, nonverbal media become more prominent. Digital cameras and video recorders are cheap and easy to use. Basic editing tools are freely available. Anybody can publish, anywhere and anytime. The new technology transforms the structure of communication. In the Galaxy, communication tends to be top-down. The center speaks and the masses listen. On the Web, communication is horizontal. The masses speak and the authorities had better listen if they want to remain in power.

In the world of education, this means less distance between teachers and students. With the new technologies – cloud computing, mobile access and social media – working side by side on productive tasks (horizontal teaching) can be more effective than transmitting information (vertical teaching). The teacher is still essential. He or she is a person (or a team) with professional skills in initiating, organizing, stimulating, supporting and guiding the learning processes of students (Hollow, 2011). The horizontal style of teaching was *possible* in the

Gutenberg Galaxy. But it was easier to teach vertically. In the digital world, the opposite applies. Digital tools work best with a horizontal approach.

Anybody with a decent web link, whether fixed or mobile, can now

1. read a good selection of **academic articles** in open access journals and repositories
2. find **answers** to a vast range of practical questions (AnswersCom)
3. read a vast range of **books** in digital versions
4. perform **calculations** on their cell phones
5. find self-published student **essays** on all the usual subjects
6. look up basic **facts** in the physical or social world (WolframAlpha)
7. read brief **introductions** to about every subject under the sun (Wikipedia)
8. find brief video **lectures** on the same
9. find detailed **maps** of any region on Earth (Google Maps)
10. design 2-D and 3-D **objects**
11. read **overviews** of most topics in the sciences
12. find companies that sell tailor-made **papers and theses** in most humanistic and social disciplines ...
13. find **photos and pictures** (flickr, Picasa, Google images);
14. locate **slide shows** on any academic, business or practical subject (SlideShare)
15. generate not-so-bad **translations** into many languages (Google Translate)
16. locate brief **videos** on every topic imaginable (YouTube, Vimeo)

Print will not disappear. The Web is added on top of the Galaxy. Those who work with learning and teaching must work with both. But when we design learning processes for the future we must work with the new environment rather than against it. Trying to keep the web and its resources away from the classroom is futile. Brief rearguard actions are possible. But the grand strategy must be digital.

Compared to other inventions, the printing press spread rapidly through Europe. But the habit of reading, which requires literacy combined with cheap reading materials, was only established in the 19th century. The Web has expanded much, much faster. The Web has moved so fast that institutions must struggle to keep up with the changes. Bookstores and publishers are threatened by web pads and e-books. Many newspapers and music stores are fighting to survive.

Schools and universities have a bit more time to adapt. But the pressure for change is increasing. Public discussions about the form and value of higher education under new technological conditions are intense in the United States. They have started to appear in Europe. In China, the future of digital education is very high on the political agenda. The debates will come, for sure, in Africa.

Qualified manpower is the key to economic growth in a competitive global economy. But high-level skills also require a solid base in society as a whole, in the form of basic education, public health and a country integrated through good communications. In the West, the new knowledge economy is supported by two centuries of industrial development. In China, and even more in Africa, the industrial basis and the post-industrial economy must be developed at the same time.

This means that the path followed by Africa and China will differ from that of Europe and the United States (Haggard, 2012). Digitalization will be more rapid and more radical, since it takes place in countries with a large peasant sector rather than a fully developed industrial environment.

East Africa: the digital environment

When we offer digital training, it is important to know the level of web access we can expect. This means both web access for participants and instructors during the course and access for participants in their normal environment at work, before and after training. Africa south of Sahara has the worst internet situation of any major world region. But the infrastructure is developing rapidly.

Wikitravel reports that more than 70% of Uganda has mobile phone access, though mountains can make trouble in parts of the country. SIM cards are cheaply available everywhere. There are plenty of internet cafes in Kampala and Jinja. The connection bandwidth is low, however. Internet cafés are also fairly common throughout Tanzania. They are easy to find in major urban areas, like Dar es Salaam and Arusha. International telecommunications have low capacity, and can be unreliable. Some mobile providers have started offering wireless internet service. All urban areas and many rural areas that have mobile phone coverage also have mobile internet coverage. Wireless 3G is available in many areas of Dar es Salaam, Arusha, and Zanzibar town.

Let me add some personal experiences, When I visited Kampala in 2010, Internet cafes worked well, if slowly. At the Makerere Guest House we could rent a computer that gave decent access. But the web was frequently down for hours at a time. University offices often had access, but not consistently. This spring (2012) we have tried to use the web to communicate with our colleagues at Mulib in real time. The general conclusion must be: sometimes it works, but often it does not. The web connection is erratic and temporary blackouts also occur (no electricity). The best and most stable digital connections inside Uganda use the phone network. From Oslo it was also easier to reach our counterparts by calling their mobile phones. Using Skype kept the costs down to an affordable level.

Delays and the blackouts are temporary problems. Digital networks are expanding rapidly. New intercontinental connections are also coming. But we want to do meaningful digital education in the meantime, as well. That is why we will set up a local hot spot based on a portable server. An institution that wants to implement LATINA, or university level e-learning systems in general, must be able to provide:

- a server to run a wireless local area network (hotspot)
- at least one classroom with a presentation system: a stationary computer or laptop (linked to the server), an overhead projector and a large size screen
- the computer must have a sound card and a decent set of speakers

- physical conditions are important: in this room students must be able to see the screen (high contrast) and hear the teacher without strain
- a functioning security system - with protection against theft and physical damage (rain, dust, heat, insects) - is essential
- backup facilities
- a stable supply of electricity
- stable technical staff - at least two and preferably three persons - able to maintain and service the software and to keep the local area network, with associated computers, printers, etc., running

If this works as planned, Mulib will receive the equipment and qualified employees will get technical training in operating the server.

South Sudan

The LATINA course in Uganda has a special link to South Sudan. Much of our funding comes from a Norwegian project in support of library development in South Sudan (EdLib). This project provides scholarships for the training of librarians from South Sudan at EASLIS, the East African School of Library and Information Science, which is also located at Makerere (Kigongo-Bukenya and Musoke, 2011). Norway has supported development projects in South Sudan for many years and is involved in several programs to develop university education. The whole idea of LATINA-in-a-box goes back to the first LATINA course in Oslo in 2008, where three of the participants came from Upper Nile University.

The long civil war in Sudan destroyed much of the educational infrastructure in the South. After the peace agreement between North and South in 2005, reconstruction began. In 2008 Upper Nile University, which is located in the city of Malakal, had about three thousand students and three hundred teachers. But it had only a handful of computers and no stable internet connection. Internet capacity was low and the cost of internet access very high, as in much of Africa. The supply of electricity was uncertain. Generators can provide back-up power, but require a regular supply of fuel, also in short supply, to function. Solar cells are a possible alternative, but must also be bought, services and protected against theft and physical damage.

A major difficulty in South Sudan was the lack of updated textbooks, of other teaching materials and of library support. But individual computers are now becoming cheap enough for widespread use, either in library settings or as a substitute for individual textbooks. If all basic materials are available in digital form, they can be stored on a local server if the internet connection is poor or costly. As connections get better and cheaper, educational materials can be stored "in the cloud", which actually means on a server farm somewhere. Using computers as presentation tools is a first step towards e-learning. LATINA represents a second step. Laptops and smartphones replace traditional textbooks. The forms of teaching and learning change accordingly. Five of our participants this year are librarians from South Sudan.

Arabic, French and Swahili

International courses often face language problems. Like most such courses, LATINA is taught in English. For participants from Uganda, Kenya and Tanzania that will not be a barrier. In these countries, English is the language of academic instruction. Our two participants from Rwanda will probably prefer French to English. Our five students from South Sudan may be fluent in Arabic and less comfortable with English. That was, at least, very much the case with our three participants in 2008. For many years the government in Khartoum promoted Arabic as the official language of teaching and administration in Sudan. English was downgraded. Local languages like Dinka and Nuer had little standing. Linguistic policies are powerful instruments in nation building. The choice of Swahili as the official language of Tanzania is an outstanding example. They create new identities, but may also draw new boundaries between people.

LATINA is a global course. This means that we cannot take English for granted. In the smaller European countries, students have to master English - at least in writing - since many of the texts they study are not available in the local language. But the demand for texts in English is lower in Spain and Italy, France and Greece, Russia and Romania. Beyond Europe the situation is even more complicated. In Latin America, students mostly need Spanish or Portuguese. In West Africa, French is dominant. Angola and Mozambique use Portuguese in higher education. Arabic is supreme in the Middle East. Most of the big Asian countries, from Turkey to Japan, use their own languages for instruction at the university level.

The global learning environment is inherently multilingual. Within LATINA we test out the practical use of several languages other than English in teaching and learning. We do this by treating language as a resource rather than a barrier. We do for instance:

1. link to relevant Wikipedia articles in languages other than English
2. use Google Translate to make rough, but understandable, versions of materials in languages such as Arabic and Chinese
3. ask participants to do some blogging in their primary language
4. invite participants to include some materials from their own languages in their class presentations

As an example of blogging I can mention Clara Escobar, who wrote two blogs during the LATINA Spring course in 2009, one in Spanish - *Bibliotecarios en apuros* - and one in English: *Librarians in Troubles*. In 2010 we did an intercultural experiment based on first languages. We asked each student to choose one culturally specific word from their own native language. They wrote the word on a sheet of paper - in BIG letters - and took turns presenting the cultural meaning of the word to the others. The students also discussed these words on their blogs. Here are two examples from Africa:

> *- **Bambi** is a word used among the Soga and Ganda tribes in Uganda. It has different meanings according to the tone used when using it. If it's a low tone, somebody maybe feeling SORRY for another. For example if I knock my foot against a stone, a friend can*

say "Bambi…" It can also be used when pleading for a favor from another person or to say.."Please!!…" However at this point it has to be prolonged i.e B.A.M.B.I. For example if I need the seller to reduce the price of something in my favor or when I need a friend to do me a favor, I can say.."Bambi…" meaning please…!!

*- **Mukama** is a Luganda word meaning Boss or Master. Most kings are referred to as Mukama meaning they are their subjects' masters. It has been used by many other people to literally to give respect to even other ordinary people. For example, if someone desperately wanted anything from you, he calls you mukama and vice versa if you are the one in need of something from him. Because of its meaning, God is called Mukama and many parents have named their children Mukama desiring them to be leaders in future.*

In 2010 the LATINA Summer course had participants from seven countries: China, Uganda, Palestine, Poland, Lithuania, Zambia and Nepal. The linguistic diversity was even greater, however. Nine first languages were represented in the class: Arabic, Bemba, Lithuanian, Luganda, Lugbara, Mandarin, Newari, Polish and Tibetan. Most countries have some linguistic minorities, like the Saami people in Norway. But China, Nepal, Uganda and Zambia are extremely diverse. *Ethnologue* lists more than forty languages in Uganda and Zambia. *Wikipedia* lists more than ninety languages in China and Nepal. This summer we will have thirty participants from six African countries: Kenya, Tanzania, Rwanda, South Sudan, Tanzania and Uganda. That means participants will speak three world languages - English, French and Arabic; one regional language - Swahili, and many different local languages.

There are nearly three hundred language versions of Wikipedia, but most of them are tiny. The main versions are very large, however. English has nearly four million and French has more than one million entries (Wikipedia: Wikipedia). The English version is much larger and more detailed than the Arabic one, of course, but the Wikipedia in Arabic can still function as introductions to relevant topics. In 2008 the group from South Sudan did a class project on malaria, and we asked them to compare the entries on malaria in the two languages. This was quite a useful exercise. The Arabic Wikipedia has nearly two hundred thousand entries. The Swahili version is very much smaller. Versions in other African languages exist, but are rudimentary at best.

Wikipedia also has a version in simplified English, which is useful for people who find academic English difficult. Let us compare the first few lines of the articles on malaria in the two versions:

Ordinary version: *Malaria is a mosquito-borne infectious disease of humans and other animals caused by eukaryotic protists of the genus Plasmodium. The disease results from the multiplication of Plasmodium parasites within red blood cells, causing symptoms that typically include fever and headache, in severe cases progressing to coma or death.*

Basic version: *Malaria is an infectious disease. It is caused by parasites. People catch malaria when the parasite enters the blood. The parasite causes a deadly infection which kills many people each year.The parasite that causes malaria is a protozoan called Plasmodium. Protozoa are organisms with only one cell, but they are not bacteria. Bacteria are smaller and simpler than protozoa.*

Wikipedia is already a major multilingual teaching resource. Many educational projects, such as Wikibooks and Wikiversity, are taking place within the Wikipedia environment. Even more important, perhaps, is the impact of machine translation. The impressive Google Translate engine currently handles translation between more than sixty languages - including Arabic, French, Portuguese, Spanish, Swahili and Afrikaans. The results are still rough, but the translation allows you to understand the main points of the text. People who prefer to work in these languages rather than English can use the Google translation as a crib when they study the English text. As an example I have translated the ordinary version (on malaria) from English to Arabic and then back again from Arabic to English. The result is quite understandable:

English-Arabic-English: *Malaria is transmitted by mosquitoes from infectious humans and other animals caused by eukaryotic protists of the genus Plasmodium. Disease results from the proliferation of Plasmodium parasites inside red blood cells, causing symptoms that typically include fever, headache, and in severe cases progressing to coma or death.*

Libraries for change

We do not view LATINA as a technological, but as a transformational project. It is designed for people and organizations that want to change their current ways of teaching and learning. The role of libraries is central because we work in the library sector. But after many years in higher education we are also convinced that libraries can be an important force for change inside their institutions. Teaching departments tend to be more conservative in their approach to teaching. They are often limited by their curricula, their traditions and the ingrained habits of their staff. Libraries have, at least potentially, more freedom of action. They are already deeply involved with teaching and research, on the one hand, and with digital technology, on the other.

As a concrete example let me quote our Ugandan alumni again (Namaganda et al., 2011):

Mulib's visibility on the Web has increased tremendously through skills acquired for example in the use of the institutional repository (USDL). Mulib librarians have thus used ICT to acquire, organize and disseminate information. In conclusion, the roles of librarians have tremendously changed from traditional to ICT-based – which in the long run calls for bigger financial investments in terms of training, hard- and software; and subscription to electronic resources if they are not open source.

Learning and teaching face deep changes. By deep change I mean change at the core of individuals and institutions. Surface change can be handled by established routines and

concepts. Deep change creates breaks between the past and the future. They disrupt familiar procedures. They force us to develop new practices: new ways of working and new ways of speaking. Individuals and organizations must, so to speak, recreate or reinvent themselves. In the digital environment many traditional ways of working lose their purpose. They must be phased out to give space and time for the new.

But even if deep change is necessary, it is seldom popular. When we move from paper to the web, we become beginners once again. We have to learn new ways of working with our own students and new ways of preparing our sessions. Since we work in institutions, and need the support of colleagues and leaders, we must promote collective as well as individual change. Digital tools are necessary for e-learning. But e-learning efforts that concentrate on tools rather than practices will not be successful (Hollow, 2011). The famous *One Laptop per Child Project* has given millions of school children hands-on experience with computers. The project has also demonstrated that useful computers can be produced very cheaply. But I agree with the points made in the Wikipedia article:

> *the laptop by itself does not completely fill the need of students in underprivileged countries*. There is *a lack of a direct relation to the pedagogy needed in the local context to be truly effective*. … People at *a low socio-economic level tend to not be able to effectively use the laptop for educational purposes on their own, but with scaffolding and mentoring from teachers, the machine can become more useful. … The approach needs to be more holistic, combining technology with a prolonged community effort, teacher training and local educational efforts and insights.*

We find similar problems in higher education. Working with the people involved is essential. Technologies have no interests to defend. Computers do not protest. Only people do. Projects will only lead to change if they have sufficient support from the organization and its environment. This support must be practical as well as political. Traditional teachers can manage with very basic tools: seats, tables, blackboards and chalk. Digital teachers must have stable access to some electronic equipment. Exams must also change. The web provides instant information. Learning, teaching and assessment can start from there. Computers are suited for active, production-oriented learning. If students are supposed to memorize lots of facts, they might as well read books.

At the edge

LATINA is not a single course with a fixed curriculum. We see it as a general approach to e-learning that can be realized through different teaching and learning formats. Since educational authorities want to know what we offer, I have tried to formulate our learning aims in the proper administrative style. While the LATINA style tends to be informal, we accept that explicit learning goals are necessary and useful in many contexts.

- After the LATINA course, participants should be able to use the resources available on the open web to retrieve, select and reuse documents, pictures and videos with a basic understanding of copyright issues.

- They should know how to produce basic teaching materials, including slide presentations, photos (record/edit), digital stories, brief videos (record/edit) and ebooks (ePub).

- They should also be able
  - to communicate effectively with users, students and colleagues through a combination of email (based on gmail), blogs (based on WordPress), cooperative writing tools (such as Google Docs)
  - to collect and organize resources for teaching and learning in multilingual environments, using Google Translate and Wikipedia (in different languages)
  - to conduct short courses covering the topics above
  - to develop and conduct/direct single web-based (or web-supported) learning modules (lasting from a couple of minutes up to an hour), using a variety of teaching and learning formats

- After the course, they should also have some basic knowledge of the web: its history, its current situation and future trends and additionally a good understanding of the developing interactions between libraries, formal and informal education and the web itself.

- They should, furthermore, be prepared to support and to work with user-oriented processes of change in libraries, in educational institutions and in community organizations - and be able to adapt the LATINA approach (tools and methods) to local conditions (technical, social) in different countries and regions.

We work at the edge. The LATINA/Lab is an innovation-oriented development unit rather than a course production unit as such. The LATINA courses are explorations and experiments in e-learning rather than standardized training programs. As course designers and conductors we try to stay close to the front of technological and pedagogical development.

Conclusions

Below, I have tried to formulate some basic principles that support our way of working. This statement of LATINA principles is not an official document. It represents my personal vision and version of the concept. My LATINA colleagues have seen the text, however. They did not scream and shout and jump about, so I feel they agree with the main thrust. But as a statement, it is a personal one.

1. Learning is hard work.
2. Tools change the user.
3. Knowledge is practice.
4. LATINA is part of the global knowledge economy.

5. We live on the web - and take access to the web for granted
6. We learn by sharing productive tasks.
7. Ordinary learning is additive. It increases our stock of knowledge. We respect ordinary learning.
8. Deep learning is transformative. It changes who we are. We believe in deep learning.
9. Knowledge wants to be shared. We share our results.
10. Knowledge is produced by communities. We build communities of practice.
11. Trust arguments rather than authorities.
12. There are no stupid questions.
13. Finding the right problems is harder than finding the right answers
14. Having fun is strictly forbidden

If we look at our world from above, we see four major social systems: technology, economy, society and culture. Digitization creates deep change in all four. Digital technology replaces the manual processing of symbols with automatic processing. Sophisticated software replaces human skills and labor. Industrial and agricultural mass production continues. But the dominating role in the economy passes to knowledge based sectors. Education, innovation and research are our new heavy industries.

The social arenas in which we operate are becoming regional (East Africa, European Union, Middle East, ...) and global in scope rather than national. Culture - the constellation of practices and values that give meaning and order to our lives - lose their self-evident, authoritative character. Increasingly, groups and individuals construct the cultures they inhabit. There are many contradictory trends and developments. But the protests are responses to discomfort rather than realistic alternatives. Nobody was able to stop the first industrial revolution. Nobody is able to stop this one.

East African libraries and universities face much tougher problems than their sister institutions in Northern Europe. But digital technology is having a big impact everywhere. The rapid growth of 3G and 4G networks means that the barriers to change have more to do with culture, customs and personal habits than with technology as such. The Benin conference asked if the same elearning concepts would apply in developed and in developing countries? Our answer is yes.

The LATINA training works with students from many different countries. Our basic approach has been the same in Norway, in China and in Palestine. Since libraries and librarians have worked with digital systems for decades, they are well placed to promote e-learning, in the South as well as in the North. We hope the LATINA course in Kampala in June will demonstrate that potential.

Resources

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