

The Open Source Road to Web 2.0 for Nigeria: A View of Two Worlds from the Outside

by Olugbenga Ademodi

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As a student of information science with a legal background related to the human rights of indigenous peoples, I realize that the recognition of critical values hinges upon the survival of the open source movement. Open source seeks the participation of all persons; it helps empower each person to be an active force in the utilization of open source resources and in the improvement of the products. Moreover, a wider segment of society is initially reached by open source in that most of the open source applications are free or low in cost. This latter aspect is very important in much of the world. I have known poverty firsthand during my youth in Nigeria, and solutions that break down the barriers thereby democratizing access to needed educational resources are of paramount importance.

What must be understood is that the open source approach respects the human dignity of each person by opening the doors to his or her participation and by typically removing the financial hurdle to participation as much as possible. As human beings, we reach our greatest potential when we do things to help others. As Linus Torvalds said in an interview about choosing a non-commercial distribution path for Linux, “So instead, I have a very good life, doing something that I think is really interesting and something that I think actually matters for people, not just me. And that makes me feel good.” Though the free market is certainly essential, it does not require us to be selfish. When we are selfless in relation to technology, it can help

so many especially in the area of education, which must always rest on a higher plain than merely commercial endeavors. Many who work in the information professions are open to helping others, and the author counts this as a blessing for the world. Still, much remains to be done, especially in developing countries such as Nigeria.

It saddens me that in the midst of Web 2.0 with all of its potential for the participation and educational improvement of individuals, it is but a distant dream for much of the developing world. What I have to give to my colleagues is knowledge of life and the state of the information professions and technology in the developing world from the standpoint of someone who has spent most of his life outside the developing world. I genuinely hope that the following comparison between the western world with all of the advantages of Web 2.0 and the world of my native Nigeria and other developing African countries will create a greater awareness of the problems such countries face in this area. Hopefully this knowledge will aid open source proponents and information professionals in general in their efforts to assist the developing world.

On the Availability of Information Technology

In terms of hardware and infrastructure Nigeria and other developing African countries lag woefully behind the western world, but open source has brought signs of hope. Nicholas Negroponte has initiated a program, One Laptop per Child (OLPS), to bring \$100 computers to the developing

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world. The laptops will utilize Linux and applications developed by MIT to keep costs down. Also, AMD and Novatium are designing laptops priced at fewer than \$200. Negroponte hopes that this program will flourish like other open source endeavors. He calls it “open-source education.” It is of the foremost importance for Nigeria and other developing African countries to be able to flourish from an educational standpoint.

Still a great deal must be done with the hardware and infrastructure to implement open source on a meaningful level for the overall populations of Nigeria and Africa. Until recently, the government has shown little interest in advancing technology in Nigeria; unlike in the United States where children are introduced to computers and other technology-related education at a very tender age, the reverse is the case in Nigeria.

In my own case I did not begin using a computer until after high school. This delay was not due to lack of interest – the equipment was simply not available for education. For example, some high school physics and chemistry labs in Nigeria do not have standard equipment, and students graduate never having seen the equipment. All they have is a description of it from a book. Thus, it is sad to envisage the backward state that such students will find themselves in when they begin to perceive this world of technology.

Even when the Internet was first introduced in Nigeria, it was mostly accessed through dial-up over a very poor telephone system. It might take an hour to simply access email. Downloading for research purposes was clearly not practicable due to the time delays. Further, most Internet access was through commercial providers that charged per minute. This automatically eliminated the common people from benefiting from the technology due to the economic costs.

Not until recently did the government begin to show an interest in technology for education. This present awareness has been yielding fruit, at least for now, with the Nigerian Communication Commission committing to acquire one million OLPC laptops in 2006. This step in the right direction is likely to be beneficial since the laptops will use built-in hand cranks for energy, thus eliminating the problem of unreliable electricity.

On the Availability of Government Information

In the western world, the open source software movement and open access to data are improving by leaps and bounds. In the United States, after making SEC data publicly available via the Edgar database, Carl Malamud has undertaken a new project to open the doors to large freely accessible digital collections of case law and statutes. On the other hand, the doors to such online information are largely closed in Nigeria and other developing African countries.

For instance, having access to governmental and legal information is easier said than done in Nigeria. Governmental information is commonly shrouded in secrecy, even when there is nothing sensitive about it. Mundane information that will ordinarily require only a day to obtain in a typical western country will often take almost a week to acquire in Nigeria, where it will be considered “top secret.” What would be considered in the United States as garden variety public information for daily transactions with the government will quite frequently not be given to a Nigerian citizen by a government office in Nigeria on the grounds that such information is supposedly classified. Even common documents like immigration forms that are readily available online in the western world are very difficult and time consuming to obtain in Nigeria.

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Furthermore, a plethora of laws, such as the Official Secrets Act, prevent governmental official facts and figures from being divulged to the public, received by anyone or reproduced. Such conduct under this act would warrant an offense for Nigerian citizens as well as governmental officials.

Access to legal information does not fare better either. As a Nigerian barrister, the author vividly remembers his experiences with court clerks. Court clerks often cause lawyers tremendous difficulties in Nigeria. Some will even demand bribes before acceding to the request of the lawyer. In a recent case in the city of Ibadan, Oyo state, Nigeria, a plaintiff through ex parte contact with a judge succeeded in having the judge assign the case to himself. The judge then granted the plaintiff’s prayer for relief and deprived the defendant of access to legal information concerning the case. Such abuses are all too common.

Similarly, where government information is intended for the benefit of the public, such as information relating to scholarships, grants and position vacancies, top government officials have been known to conceal these things to insure that the benefit passes on to a member of their own family. The underlying reason for such governmental secrecy is to insulate acts of corruption or misappropriation of public opportunities from public censure.

Governmental and legal institutions in Nigeria should borrow the philosophy of many academics in making content open, unless there is some vital and legitimate reason for not doing so, such as national security. Professor Derek Keats has recommended open content as an approach to assist African universities in developing course content economically. He cites Professor Newmarch for the underlying philosophy that “open content refers to the principle that content should be freely reusable so as to make knowledge available as common knowledge for the common good.”

This principle should be applied to all knowledge, even legal and governmental, in the absence of some overriding and legitimate reason for withholding the information.

On the Availability of Current Awareness Information

Concerning access to current awareness information, RSS has revolutionized the western world. Users can receive the latest news and website updates through aggregators and other means. As valuable as RSS technology is, Nigerians have generally not come to a real awareness of it yet. Although there are means of disseminating information such as through word of mouth and newspapers in Nigeria, such means are far from adequate. Nevertheless, most Nigerian newspapers have begun to publish online, which has enabled those outside Nigeria to be able to follow its internal news. Additionally, many Nigerian youths and students now chat online using MSN and Yahoo messenger. Still, so much more is yet to be experienced by the students and people of Nigeria. They are not truly participants in the Web 2.0 world of social software and RSS, when participation is what Web 2.0 is all about. With help from colleagues in the open source and information world, I feel that the youth of Nigeria will build upon the opportunities and knowledge they obtain to ultimately one day even be able to help others as full participants.

In relation to online sharing, westerners may share images on Flickr, personal video clips on YouTube, minute daily details on Twitter, and knowledge and comments through blogs. For the most part, Nigeria and other developing countries do not afford most people these wonderful options.

On the Availability of Cultural and Historical Information

Every patron wishes to have access to information about his or her past; however, in many third world countries such as Nigeria a sizeable part of the population is illiterate

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and if the need arises to explore their past, they can only rely on word-of-mouth from their elders. Those that are literate are a bit luckier because they can listen to oral history from the elders and read the newspaper. From experience, this source of information usually tends to lead to confusion as there will be different versions of such oral history. Further, newspapers might become unavailable in time. Over the years the tribal and religious artifacts of indigenous people have been removed to museums and collections elsewhere. While this action was done with good intentions, most people are unable to travel to see, understand and appreciate the relics of their past, but with technological advances a tribal center could be established that would permit anyone to browse through a virtual museum of his or her cultural heritage.

One small step in this direction is the online Nigeria portal (<http://video.onlinenigeria.com/nigerianvideo.asp>) where video about Nigeria's culture may be accessed by a small number of Nigerians. While this initiative should be commended, it is still a far cry from a meaningful sharing of educational information among Nigerians. Nigeria simply lacks technological facilities, and I can vividly state from firsthand knowledge that the people are just too poor to be able to pay to participate. Help from projects like OLPC is the only way for Nigerians to enjoy such possibilities since the government seems to be too overwhelmed with the burden of governance to be able to bring about technological advancement on its own.

On the Status of Library and Information Science Education and Practice

Library and information professionals, libraries and library and information science education in the United States are perceived in radically different fashion than in

Nigeria and the developing countries of the African continent. While library and information science is one of the best studies that one could embark upon for a career, it is viewed as more of a clerical endeavor in Nigeria than a professional field of study. The profession is looked down upon to such a degree by many Nigerians that it is difficult to find a student who will openly declare that she or he intends to become a librarian in the future. Moreover, library and information science students are also usually under pressure from parents to change their course of study to a more prestigious one such as medicine, law or accounting. The source of the problem is that many Nigerians have the false impression that all librarians do is store and shelve books. In other words, they see librarianship as more on the order of an odd job. Consequently, only the weakest candidates are typically drawn to the field in Nigeria.

The situation is entirely different in the United States where the profession is as respected as other major professions. For this reason, it is not surprising that the United States offers many more LIS degree programs per capita than Nigeria. This indicates that the library and information professions are highly sought after in the United States with many people entering the field.

Hope for the future rests in outreach from abroad to help educate and improve opportunities for Nigerians entering the profession. These Nigerian information professionals must in turn work to educate the populace concerning the profession. Better public understanding will hopefully help to increase salaries.

Libraries and information centers play a very different role in the western world than in Nigeria. In the United States, members of the general public tend to make use of libraries to conduct their research and in the process seek help from librarians to enable them to complete such tasks.

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In Nigeria, people tend to receive information by radio, television and word of mouth. Perhaps, this is largely attributable to the lower literacy level.

Library operations and library education are antiquated when compared to the western world. The archaic and outdated manner in which librarians in Nigeria still carry out library operations is very discouraging to incoming students. From experience, most of the catalogue pages in Nigerian college libraries are missing or torn. It is disappointing to still see Nigerian libraries relying solely on the card catalogue whereas their counterparts in the United States are currently looking towards RDA and FRBR and have used OPACs and MARC for some time. This renders the profession more enticing to newcomers in the United States. I believe that this problem could be resolved with the assistance of western institutions by granting fellowships to librarians from Nigeria to come and study systems in the western world. Nigerian librarians could then bring this knowledge acquired back and inject it into the ailing Nigerian library system.

From the standpoint of curriculum, Nigerian library education has yet to enter the beneficial marriage with information science that has taken place in the United States. In Nigeria, the few universities that offer library studies offer only library science; this is an enormous drawback because the field of study in Nigeria remains an ancient relative of its American counterpart, which has harnessed the full potential of information science and technology to advance the field of study.

On the Potential for Web 2.0 and Open Source Approaches to Aid Development

The creation of knowledge, through Wikipedia for example, is truly participatory for much of the western

world. As of late, Wikia has acquired Grub, a web crawler from LookSmart, and will be permitting users to participate in indexing for a community developed search service later this year. This open search movement is aimed to compete with Yahoo and Google. Western users are empowered to participate, a key element of Web 2.0 as Tim O'Reilly has stated. They may also participate through tagging and the creation of folksonomies. Many of the people of Nigeria and other developing African countries will not be able to participate in these ways and thus their voice will be lost.

The people of the Niger Delta region of Nigeria whose environment has been polluted by multinational companies would have greatly benefited from these technologies of knowledge creation, preservation and dissemination. These people would have been able to bring their plight to the attention of the whole world if they had had access to these technologies. It saddens me that people in other parts of the world are not even aware of the agony that the people of the Niger Delta region are experiencing. This lack of awareness is due to the fact that they cannot voice their complaints beyond their locality.

For instance, if these people were able to show their degraded land, destroyed farms and polluted waters by showing this on a video sharing medium such as YouTube, their plight would be understood by the world. Instead, the multinational companies are capitalizing on the inability of the people to voice their suffering and are continuing to exploit these downtrodden people. Moreover, the multinational companies also feed the international community with contrary information about their activities in Nigeria and other developing countries.

The solution clearly lies with the open source movement and Web 2.0. Leapsoft Technologies of Nigeria has pointed out that open source is the future of Nigeria.

On the shoulders of open source movement, video sharing, file sharing, blogs, wikis and podcasting could make a tremendous difference in the lives of the people of the Niger delta and other developing countries by enabling them to spread the truth to the world.

The high cost of proprietary software has turned some Nigerians to the pirate market for operating systems, but beyond the moral issues, such software often harms their systems and their files. In 2003 the United Nations even stated that the use of open source software is one of the factors needed to energize the economies of developing countries and hopefully thereby bring about improvements in information infrastructure for most of the people of developing countries. Open source is necessary for better education, more jobs and better government. On the shoulders of open source movement, video sharing, file sharing, blogs, wikis and podcasting could make a tremendous difference in the lives of the people of the Niger delta and other developing countries by enabling them to spread the truth to the world.

I hope to see more philanthropists like Nicholas Negroponte, who detailed specifications for a \$100 crank-powered laptop targeted at children in developing nations. Further, the librarians and academics in Nigeria must be trained to utilize and preserve the equipment, thus enabling them to train others.

Conclusion

In Africa, Internet connectivity and bandwidth is reserved for those who wield power, have a computer and are able to pay for their connectivity. A large portion of students and faculty who cannot afford these tools are deprived of needed educational opportunities. Without help, little or no progress can be made because people in the academic field lack access to the resources. Like OLPC, the focus of efforts must be to assist libraries and educational institutions in Nigeria and other developing countries as these institutions reach many of those most in need. Further, the librarians and academics in Nigeria must be trained to utilize and preserve the equipment, thus enabling them to train others. With western educated library professionals or academics, improvement in technology resources, utilization of open source solutions, the work of philanthropists and the advice and support of colleagues in the information professions, hope for a general populace empowered to voice their messages to the world via Web 2.0 technologies is no longer just an illusion for Nigeria and the developing countries of Africa. ■

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