

IFLA REGIONAL OFFICE FOR AFRICA

AFRICA DISCUSSION & REPORTS

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IFLA TREND REPORT PANEL DISCUSSION

PURPOSE OF SESSION

To deliberate on the IFLA Trend Report, identify its impact on Africa and recommend strategies for information access and delivery.

PANEL

Jacinta Were, Kenya

Justin Chisenga, Ghana

Sarah Kaddu, Uganda

Ujala Satgoor, South Africa

FACILITATOR

Buhle Mbambo-Thata

REPORTER

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TREND1 New Technologies will both expand and limit who has access to information

When information is so easy to share – can anyone really own it?

The IFLA Trend Report acknowledges access to information as having a profound influence on future developments in the information economy.

An ever-expanding digital universe will bring a higher value to information literacy skills like basic reading and competence with digital tools. People who lack these skills will face barriers to inclusion in a growing range of areas. The nature of new online business models will heavily influence who can successfully own, profit from, share or access information in the future.



Discussion points

1. In your part of the continent how does this trend impact on your work and environment?
2. In what way has your organization or country explored the possible the impact of this trend?
3. In your view how should libraries respond to this trend as regard Information and digital literacy, IP, copyright and data management?
4. Are there practical ways in which your library community has responded to this trend?
5. In your part of the continent how does this trend impact on your work and environment?
6. In what way has your organization or country explored the possible the impact of this trend?
7. In your view how should libraries respond to this trend as regard Information and digital literacy, IP, copyright and data management?
8. Are there practical ways in which your library community has responded to this trend?

LIKELY DEVELOPMENTS

The on-going explosion of choice of digital content and information increases the importance of information literacy skills as essential tools for distinguishing authoritative information from content that is influenced by various social, political, commercial and sometimes extremist agendas.

Tension continues to increase over ownership of intellectual property and technological innovations. Adaptations are needed to reflect new patterns of information use and to support creativity and economic sustainability.

In a hyper-connected world, access to information becomes the gateway for health, education and employment resources – as well as social, political and economic freedoms. A billion new Internet users in developing countries change the landscape of the online world. However, deficiencies in reading and digital literacy skills remain barriers to accessing online resources, possibly leading to a widening digital divide and global inequalities.

Mobile access to digital content and products from a broader range of devices weakens the traditional concept of ownership based on static rights to content in one location.

The operation of the Internet as an open and internationally accessible source of information is threatened by governments seeking to extend control over their own information environments. This type of control leads to a patchwork of national Internets.

Questions of ownership of information and content become more complicated as boundaries between producers and consumers of information are increasingly blurred. A rise in the amount of content created by automated machine processes further complicates such situations.

The existing business models of many online service providers designed to make money from submitted personal data and user-generated content are challenged. The debate around future business models focuses on whether these profits should be shared between content creators, intermediaries and the original owners of personal data.

The use of technical measures to prevent access to copyrighted content becomes outdated, as new business models that harness public enthusiasm for consuming, sharing, creating and modifying offer a broad range of content across different platforms and devices.”

CONTRIBUTIONS RECEIVED

Edwin Qobose, Botswana

From where I stand representing the premier institution in the land, but certainly not Botswana as a country OR southern Africa, this is my take,

My institution (University of Botswana, UB) adopted the recommendations of Digital Scholarship report in 2008, and in 2009 digital repository policy was endorsed by Senate. But I must say unfortunately we have not done enough in the past 5 years to implement and live the recommendations of the DS. By and large UB is still very much far from being a paperless campus in terms of its teaching and service delivery. The UB library on the one hand has excellent infrastructure, but due limited staff expertise, it is not operating up to the expected standards

At national level efforts have been made to improve bandwidth by connecting both to the west and east coasts of the region, of course at very exorbitant costs. Government has very good intentions of e-government, but at times one is frustrated when the 'system is off'. Thus internet connectivity has greatly improved and mobile technology ownership has also drastically improved in recent years. I suspect almost every household has a cellular phone and two out of 10 students have a smart or near smart phone, (not based on any study) and so the use of social media has generally mushroomed. The challenge then is that we don't seem to tap into this to deliver educational and or information messages. The cellular phone providers and banking sector in the country have largely adopted the new technology by delivering most of their services on line

Libraries should naturally be pace setter when we talk about Information and digital literacy, IP, copyright and data management. My view is that we have not played our leadership role in this. Yes information literacy at its very basic and I suppose this is the challenge of digital immigrants trying to teach digital natives. IP and copyright issues is being pioneered by artists, who are well organized with an association to guard against copyright infringements in the music industry

Regards

Sarah Kaddu, Uganda (Personal views).

5. In your part of the continent how does this trend impact on your work and environment?

General views on positive contribution to access to information

Environment: Overview

Clients/Patrons' expectations are changing so fast. For instance, they need current and updated information, they no longer want to wait in the long queues to get information, and they need quicker and better delivery of information services. A country such as Uganda has to develop a national broad band infrastructure to be able to meet the demands of the people.

In East Africa for instance, whoever you meet talks about smart phones, androids, and others. This implies that the mobile phones that were 2GB are no longer in demand but rather the 3 GB mobile phones because of the services like *viber*, *Skype*, *whatsup* which may/ cannot work on old mobile phones. Therefore, there is no more big market for old model mobile phones. Many uses of mobile phones require more bandwidth or broad band capacities to handle the expectations and demands of users.

In Kenya, for instance, the social media had impacted on democracy. Back in 2007, they used *sms* and *mobile phones* to campaign against the government in power.

In 2013, in Kenya, the candidates applied the social media to support their political agenda which also resulted into the slogan "*we are going to be a digital with this*

government” and so, this worked so well in mobilizing voters. Another example again from Kenya is when they got a new constitution; they were using *Television* to interview people live as the citizens were phoning in to pose questions. The judges too, have been interviewed online by the citizens deploying social media such as twitter for accountability and good governance.

In the East African countries, there is social inclusion using mobile money. There is access to information through mobile money transactions. Those parties to the services received information such as “am sending you so much money to do ABC. While using this facility, information access and utilization is quite very fast. Clients have increased their credit on the mobile money where the banking is not possible in society and the fact that they do transactions, that is information itself

Health alerts

The technologies have started alerting people if there is a problem in the body system that needs to be fixed very soon before actually the person is down with any seen symptoms.

Driving and Navigation

The new technologies can inform a driver if the driver needs to refill the gas/fuel and where the next gas station is.

To some cars, one no longer needs a car to start the car but rather the biometric prints. One no-longer needs to cram directions so long as the navigation is turned on and s/he is able to pay attention to it.

Work impact

- Live chats have been introduced in some libraries to respond to patrons queries
- Email reference services have been introduced through ‘Ask a Librarian’ provision on library websites
- Messaging software such as Pidgin have been introduced to receive messages from patrons
- Instant help software too have been introduced to assist patrons who need help using library software such as help H3LP
- For the eLearning and Distance classes, an embedded librarian is always assigned an online class to manage the information needs and also to answer student and faculty queries.

Negative

There is still the issue of digital divide- no access to the hi-tech technologies to offer some of these services. In cases where the hi-techs are available, sometimes there is digital illiteracy and sometimes, not aware of the benefits these hi-tech offer.

Additionally, there is the issue of bandwidth especially for the countries with low developing economies.

Theft/fraud has also become common with the new technologies.

Terrorism- because of the technologies, the terrorists can communicate with social media

tools. This is evident with what happened at the West Gate Mall in Kenya when the terrorists used twitter to send information forth and back.

Privacy is in a serious threat. Recently, one lady made a post to a social media in New York informing others how she had successfully managed to take her pet with her to gazetted areas. And, yet, the police previously was looking for such a person who had done the 'unwanted'. Indeed someone came across this posting and alerted police, so she was reprimanded.

Security concerns- This is evident with the Samsung S5 and S6 which will provide all details about where one is and what s/he is doing. Some of the new technologies seem to be revealing so much information.

Regards

Buhle Mbambo – Thata, South Africa

7. In your view how should libraries respond to this trend as regard to Information and digital literacy, IP, copyright and data management?

- Librarians/information workers should embark on skills development to be ahead of the needs of the library community
- Library and Information Science Educators should regularly review their curricula to address the new trends demand.
- To acquire skills in: managing eContent, Information ethics and cyber ethics

8. Are there practical ways in which your library community has responded to this trend?

- Librarians/information workers should embark on skills development to be ahead of the needs of the library community
- Library and Information Science Educators should think of reviewing their curricula to address the new trends demand.
- Make an e-library provision to meet the needs of the users who no longer come to libraries (for instance, providing wifi around the library spots so that users can access the library resources from everywhere not necessarily from the library building).
- Implementing chat references services among the current references services provided
- Go for screen share software – a software that will let the users/patrons and reference librarians see each other's screen to minimize on miscommunication and the confusion that would come with the chat references.

Regards

TREND 2 Online Education will democratise and disrupt global learning

If online education is free, then how much is it really worth?

The rapid global expansion in online education resources will make learning opportunities more abundant, cheaper and more accessible. There will be increased value on lifelong learning and more recognition of non-formal and informal learning.



Discussion points

1. To what extent have MOOCs been used and or developed in your learning/teaching/working environment?
2. What has been the extent of the adoption of OERs in your environment?
3. How are MOOCs, OER and Library schools interplaying in your environment?
4. What do you see as the role of libraries/librarians in an environment with active participation in MOOCs and OERs

LIKELY DEVELOPMENTS

Online Open Education Resources (OER), adaptive teaching technologies, Massive Open Online Courses (MOOCs) and gamified learning approaches transform the global learning landscape over the next decade.

Online courses will be serving more people in the near future than all the students currently attending universities around the world. New courses feature more cross-sectional, multidisciplinary learning.

Digital opportunities for lifelong learning become increasingly essential in a more globalised economy and a rapidly changing technological environment where more people gain new skills and knowledge throughout their adult lives.

Broader strategies to build knowledge and skills raise the recognition and certification levels of non-formal and informal learning pathways. Skills and experience gained in everyday life become more visible and valuable.

In an environment where information is easier to locate and obtain, future educational methods focus more on how to authenticate and exploit this information. Memorisation of information continues to decline in importance.

The wave of disruption of traditional methods of learning driven by online education benefits learners by dramatically reducing costs and increasing access to wider learning opportunities.

The future education market becomes shaped by network effects that drive business models of companies like Google, Facebook and Amazon. Established education providers risk being undermined if content producers successfully engage with popular new consumer platforms that offer a wide range of content.

The broad adoption of MOOCs increases the added value of intermediaries that offer a platform for peer learning, mentoring networks, co-study, collaboration and informal support. This change applies to both online and face-to-face methods.

Open Access to scientific publishing makes millions of peer-reviewed articles globally available, helping scientists share and build upon each other's discoveries. Innovations in health, infrastructure and commerce are born from their collaboration.

Online resources and adaptive teaching methods transform school classrooms, combining digital tools with human support to tailor each student's learning experience.

CONTRIBUTIONS RECEIVED

Justin Chisenga, Ghana

I am a user of MOOCs and have participated in several MOOC-based courses mainly on Sustainable Development, and Climate Change.

My contributions below are only limited to Questions 1 and 4.

1. To what extent have MOOCs been used and or developed in your learning/teaching/working environment?

Although not necessarily MOOCs, my organization, with partners has developed several online/e-learning courses under the Information Management Resource Kit (IMARK) (<http://www.imarkgroup.org/>). IMARK modules are open to anyone who can access them on the Web. Among others, the modules include Social Media for Development, Strategic Approaches to Information, Management of Spatial Information, Knowledge Sharing for Development, and Digital Libraries, Repositories and Documents. IMARK has provided a platform for continued learning for information professionals.

Within my work environment, I promote the use of e-learning resources. My organization does not a critical mass of staff to carry out capacity development initiatives across Africa. I therefore rely on e-learning course to ensure that beneficiaries of our information and knowledge management initiative acquire the knowledge and skills they would need.

4. What do you see as the role of libraries/librarians in an environment with active participation in MOOCs and OERs

MOOCs and OERs have great potential for Africa. Already, thousands of Africans, without the intervention of libraries or librarians, are participating in hundreds of MOOCs each. Libraries, especially public and community libraries and information

centres, could play an important role of providing the necessary technical infrastructure for the citizens to access and use MOOCs. These should be the access points for MOOCs.

Regards

Kgomotso Radijeng, Botswana

Colleagues, while I have not done a MOOC program before myself I see more and more people around me taking up the programs to upgrade their skills and competencies. They may not get certificates, but they recognise the value add of such programs to their professional growth.

Libraries should position themselves to offer support to such people in terms of providing the space for learning (some people may not have reliable internet access which the library could provide). Libraries could also provide support in terms offering tutorials and online information support structures. Libraries become particularly important when learners are from rural areas or poor backgrounds.

Regards

Hello Africa-L family,

Thanks to Justin, Kgomotso and Sarah for their insightful comments on Trend 2. I see a lot of convergence in their inputs. At the end of this discussion I was left with two questions - how many MOOCs or OERs have been created on the continent in the field of LIS? Could some of Justin's courses be turned to MOOCs to expand reach?

It would have been great to hear from librarians who are supporting MOOCs and OERs in their line of work. It would also have been great to hear from academic colleagues about how these affect LIS education. So, colleagues from those sectors may still comment while we move to Trend 3.

Thank you colleagues for participating in your different ways, some by speaking and some by lurking. ☐

Kind Regards

Buhle

TREND 3 The boundaries of privacy and data protection will be redefined

Who's profiting from your personal information?

Expanding data sets held by governments and companies will support the advanced profiling of individuals, while sophisticated methods of monitoring and filtering communications data will make tracking those individuals cheaper and easier. Serious consequences for individual privacy and trust in the online world could be experienced



Discussion points

1. Should we be afraid or free to share information on-line?
2. To what extent are we incorporating online intelligence to information literacy?
3. What bearing do these privacy matters have on libraries in Africa?

LIKELY DEVELOPMENTS

More sophisticated profiling of individuals and social groups is better enabled by expanding data sets collected by governments and companies. Advanced capacity to process data from a wide range of sources increases opportunities to connect anonymous information with a specific person or group.

Governments find it easier and cheaper to track their citizens' activities and filter information through the mass monitoring of communications data and metadata from various platforms and devices.

Commercial monitoring and tracking also increased in sophistication, with emotional metering and retina-movement analysis growing alongside the use of traditional mouse-click tracing and browser cookies.

The challenges of regulating a global borderless Internet at an international level while satisfying different national regulations continue to make it difficult to offer consistent standards of online privacy and data protection.

Without improved legal safeguards, governments increase pressure on multi-national web companies to surrender communications data, associated metadata, and online activity records. This scenario has precedent in the recent controversy over the US PRISM programme.

Discriminatory pricing of goods and services based on detailed knowledge of a person's online activity intensifies, with an increase in companies offering the same products and services at different prices to different people based on their personal data.

Levels of trust in the online world flatten or significantly decrease. Many people are presently comfortable with sharing large amounts of personal information online

through social networks or online activity tracking systems. This behaviour changes as individuals begin to realise exactly how much of their activity is being monitored.

Increasing numbers of commercial online platforms include encryption and security within their services, as privacy becomes a more attractive selling-point. Despite competition between online tools with more privacy and those which support greater monitoring, many Internet users continue with interactive and user-friendly services without major concerns over security.

In situations where posting information online effectively surrenders future control over that information, people have to balance their desire to engage, create and communicate against any risks connected with leaving a permanent digital footprint.

CONTRIBUTIONS RECEIVED

Ellen Namhila, Namibia

At a recent conference I was introduced to the audience so eloquently by the chair as if she has known me my whole life. I was shocked because they never asked for my CV and even if they did, most of what she said is not part of my CV.

I am a librarian and feel I somehow lost my privacy. To Buhle question 1, I am rather afraid, but again, the fear may not take us further in this global village. There is a need for deeper understanding of the tools we are using, information we put there and apart from reasons why we voluntarily share our personal data, or process personal data of our library clients, to what extent are we exposed or exposing others?

That is perhaps why EU Parliament is busy discussing the right to be forgotten?

Regards

Ujala Satgoor, South Africa

Colleagues, our discussion points for Trend Three are:

1. Should we be afraid or free to share information on-line?

The burgeoning of social media has unwittingly granted and enabled access to personal information, which otherwise would not have been available in the public domain. Majority of individuals on various social media platforms do not realise the implications of the wide availability of their personal information. I think we need to be wary of the data mining that is happening via handsets, smartphones, apps, etc.

2. To what extent are we incorporating online intelligence to information literacy?

Presently most institutions focus on information literacy (IL) specifically for the teaching and learning mandate. The fact that most students do not understand the concepts of IL

has necessitated greater emphasis being placed on each student being taught the 6 IL standards in a very mechanical way. Greater emphasis needs to be placed on understanding information and how it must be used ethically.

The use of Web 2.0 tools such as blogs and Wikis for group study and collaborative learning is not as prevalent as it is in the US. However social scholarship could be a means for sharing research and networking e.g. Twitter feeds could be used to circulate research information about

3. What bearing do these privacy matters have on libraries in Africa?

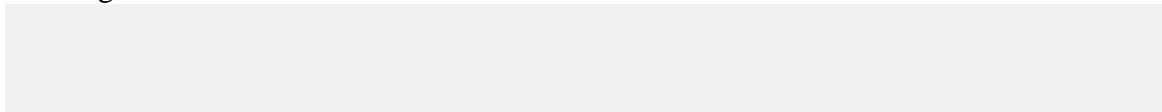
The increased use of mobile technologies in Africa has definite implications for privacy matters. Wireless connectivity provides greater access to social platforms and applications, which are limited at certain libraries due to broadband constraints.

Recently we were able to ascertain the types of devices being used by students to access the Library website and e-resources by checking device registration protocols.

In South Africa, the Protection of Personal Information Act (Popi) became law on November 26 2013. It essentially regulates how anyone who processes personal Information must handle, keep and secure that information. Institutions and companies have a year within which to comply with its requirements. Being an extremely strict Act, lack of compliance could result in hefty fines or jail terms.

Libraries need to ascertain their systems security as well as levels of access to personal information by different levels of staff such as student assistants, librarians and systems managers.

Best regards





TREND 4 Hyper-connected societies will listen to and empower new voices and groups.

Who will be most empowered by greater transparency and citizen access to public sector data – politicians, citizens or corporations?

More opportunities for collective action are realised in hyper-connected societies – enabling the rise of new voices and promoting the growth of single-issue movements at the expense of traditional political parties. Open government initiatives and access to public sector data will lead to more transparency and citizen-focused public services.

Discussion points

1. To what extent have libraries used connected communities to deliver service?
2. How can crowd sourcing advance the library and development agenda?
3. How can libraries in Africa promote open government?
4. Please share experiences from your community that have been precipitated by hyper connected communities phenomena

LIKELY DEVELOPMENTS

The size of the digital universe is predicted to double every two years, with its content increasingly shaped by different social, political, and commercial agendas. Technology that drives better communication and collective action continues to support positive outcomes: empowering individuals, increasing civic participation and commercial accountability. Negative outcomes can also arise from use of the same technology: empowering cyber criminals, terrorists and extremist networks.

Democratic countries benefit from greater transparency, access to public sector data and a growing momentum behind open-government initiatives designed to empower citizens, reduce corruption and strengthen governance through new technologies.

Traditional political parties are weakened as voters increasingly gather around single issues which support their values and interests. One major effect may be a bridging of social, political, generational and geographical divides.

Wide-reaching digital resources transform the status of women by expanding access to health, business and related social network information. The same resources offer a global voice for many citizens to endorse or condemn policies and politicians from other countries – and empower diaspora and migrant communities.

Commercial lobbyists and political elites adopt approaches that have yielded success for online activists in mobilising mass popular sentiment around single issues – but using more systematic, less organic methods.

More use of simulated virtual environments enables people to test potential decisions in a simulated context before application in the real world. Consequently, voters can project the likely social and economic impact of political party policies before deciding which to support. The same process helps governments to determine policy.

Future governments do not just gain legitimacy through elections – their ability to deliver on open government and transparency objectives supported by digital technologies could also become major new sources of political and institutional credibility.

Effective use of open government data requires greater professionalization of information management skills in the public sector. Services that are increasingly digitised by governments may need to rely on intermediaries who can help disadvantaged citizens use evolving digital services and platforms.

Big data supports more effective evidence-based policy-making in many fields – including health, social care, environmental conservation and climate change.

TREND 5 The global information environment will be transformed by new technologies

When your phone, your car and your wristwatch know where you are at all times - who runs your life?

Proliferation of hyper-connected mobile devices, networked sensors in appliances and infrastructure, 3D printing and language-translation technologies will transform the global information economy. Existing business models across many industries will experience creative disruption spurred by innovative devices that help people remain economically active later in life from any location.



Discussion points

1. To what extent has 3 D Printing affected creativity and alternative manufacturing in your locality?
2. ‘Internet of things’ will lead explosion of recorded data’. In your part of the world, to what extent are libraries involved in discussions on national data policy?
3. Have libraries taken advantage of mobile connectivity to support economic development?

LIKELY DEVELOPMENTS

Mobile devices become the main medium for access to information, content and services. As a result, new social and economic groups are empowered through increased access to health and education resources, as well as e-government and financial services..

Advances in artificial intelligence enable networked devices to combine speech recognition, machine translation and speech synthesis to support real-time multilingual voice translation.

The capacity of 3D printing technology to create usable objects from digital blueprints transforms the value of information access, and triggers creative disruption in global manufacturing industries.

Progress in telecommuting, networked Telehealth and Telecare systems, wearable computer devices and intuitive user interfaces – activated by voice, retina movements or touch – helps people remain economically active longer in life.

Individuals and businesses increasingly are able to participate in the global information economy from anywhere on the planet. This connectivity reduces some competitive advantages linked to physical location.

Rising competition from developing economies creates a need for increasingly protectionist economic policies from the developed world. Overly-complex requirements and compliance regulations become more common.

By the year 2030, 70 per cent of the world's population is projected to live in cities. But a possible longer-term trend exists for people to exploit hyper-connectivity to relocate back to smaller communities. A reactivation of the economic, social and cultural fortunes of those settlements could result.

As many developing countries benefit from growing youth populations, much of the developed world continues to face the economic challenges of an aging workforce. Developing world firms have increased opportunities to replace the developed world businesses which currently occupy the most high profit areas of the global economy.

The number of networked sensors embedded in devices, appliances and infrastructure nears 50 billion by the year 2020. This "Internet of things" leads to a further explosion in recorded data with major implications for future public services and data-driven policy-making, as well as new challenges for individual privacy.

Agnes Chikonzo, Zimbabwe

To what extent has 3D Printing affected creativity and alternative manufacturing in your locality?

With 3D printing technology continually evolving, the complexity of the items created evolves too, and while most consumer-level printers only use plastics as the printable material, there are industrial models capable of doing much more. Many different materials can be used for 3D printing, such as ABS plastic, PLA, polyamide (nylon), glass filled polyamide, stereo lithography materials (epoxy resins), silver, titanium, steel, wax, photopolymers and polycarbonate.

In terms of the technology's impact on creativity and alternative manufacturing a major question which arises is; what happens when people at home can just go online, find the plans for a product, plug those plans into the printer, and recreate that product? This new manufacturing and automation technologies have the potential to change work patterns in both the developing and developed worlds.

Though 3 dimensional printing has not developed significantly in Zimbabwe, it has been used in manufacturing of car parts and industrial equipment in South Africa. It has the potential to improve productivity, address labour constraints, and diminish the need for outsourcing. For developing economies, particularly Africa, the new technologies will

stimulate new manufacturing capabilities and further increase the competitiveness of African manufacturers and suppliers.

However, some believe 3D printer technology represents a threat to a large number of manufacturers of small, mostly plastic goods, to the employees who make them, and to the stores who sell them. They believe it is the kind of technology that could, in theory, create an economic tsunami capable of crashing some markets.

“Internet of things”- Will lead explosion of recorded data’. In your part of the world, to what extent are libraries involved in discussions on national data policy?

The exponential increase in data, combined with emerging capabilities to analyse and correlate it, will give unprecedented capabilities to individuals and connected networks in nearly every part of the world. Sharing data opens access to and reinforces open scientific inquiry, encourages diversity of analysis and opinion; promotes new research, supports studies on data collection methods and measurement, facilitates the education of new researchers, enables the exploration of topics not envisioned by the initial investigators and permits the creation of new data sets when data from multiple sources are combined.

In many cases librarians are playing a critical role in the formation of local institutional data management policies. It is not difficult to see why librarians have become natural partners in the research data management (RDM) process. They have highly relevant information standards and organisational skills, including expertise in setting up file structures, knowledge of workflows and collection management, describing data in accordance with established metadata schemes and controlled vocabulary, collection curation or preservation and service provision in form of helpdesks, training, and availability of subject specialists. However, this has not been the same at national level and this has largely been as a result of the fact that Zimbabwe is still at the formative and draft stages of a national information policy and the crafting of a national data policy has not yet attained significant agenda status. In this regard, the desired strategic necessity is for librarians to sensitise decision makers and lobby for a national data policy.

Have libraries taken advantage of mobile connectivity to support economic development?

Mobile devices are becoming increasingly rich sensor platforms, enabling nearly all communication mediated by technology to be tracked and analysed at a fine level of detail. More than 90 percent of Zimbabweans population already has at least one mobile device.

The spread of smartphones and other hand held devices in Zimbabwe during the past 5 years has been particularly been impressive. Now millions of Zimbabweans are connected to the Internet and the outside world, and they are using such technologies to

mitigate health problems such as waterborne illness through sending of messages to risk populations.

Zimbabwean Libraries are embracing mobile technologies in their service delivery as witnessed by introduction of mobile Library technologies in some academic Libraries in the country. This has a net effect of improving access to information for research and development.

M-Libraries improving access to information for research and development

- Mobile technologies have offered new opportunities for Libraries to provide improved access to digital resources to promote local research and development.
- Some Libraries have created mobile compatible websites with a mobile interface that facilitate access to Library resources and services through mobile devices. Mobile Library websites provide a more convenient avenue for opening remote access to digital resources thereby improving access to information and research. Examples of Libraries that have embraced Mobile Library websites technology include the University of Zimbabwe (UZ) Library, though currently down, and the National University of Science and Technology (NUST).
- M-Libraries provide more access to research information necessary for informed decision making, and generation of knowledge.

Mobile text applications providing new opportunities to provide remote Reference Services

- Libraries are embracing mobile technologies in service delivery and communication with clients. Reference service models like Text a Librarian have for long been adopted and used in delivering Reference services. Mobile text applications like the WhatsApp Messenger applications have been embraced to improve communication with clients and enhance access to Library services and resources. The UZ Library, for example, is now providing Reference services through WhatsApp application to provide research assistance and immediate Library help that enable users to save on time and travel costs.

The University of Zimbabwe Libraries has also started piloting the provision of evidence based health information to doctors at Parirenyatwa Hospital as way of contributing to the development of the country.

Mobile information services to support Agriculture

Another landmark innovative programme by the University of Zimbabwe Libraries has been to support food self-sufficiency starting from house-hold level by providing

agricultural information to farmers across the country. Through the UZ Library e-Farming mobile information service, local farmers are obtaining access to Agricultural information such as market prices thereby saving on time and travel costs. Farmers are also able to make right decisions and increase production.

Regards

Conclusion

Dear colleagues,

Big congratulation to Buhle Mbambo Thata for the concept and for moderating this discussion about the Trend Report. Also, to each one of you for participating on the analysis and discussion. I wanted to send a brief message to say I am following the discussions and have shared the concept of discussing the Trend Report via listserv with other colleagues. It is very inspiring and I hope others could follow the model. There will be a program about the Trend Report during the IFLA Congress and my topic is privacy--- I've been reading this particular thread with interest.

Kindest regards,
Loida

Loida Garcia-Febo
IFLA Governing Board Member

I totally agree with you Loida, the pioneering discourse started by Buhle is indeed innovative and inspiring.
Ellen Namhila