

Building librarians' capacity to use ICT in services that meet community needs in Africa

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Abstract:

The process of adoption of information and communication technologies (ICT) is accelerating globally, but low-income economies still lag behind, particularly in sub-Saharan Africa (Paua, 2004). To bridge this gap, many African governments have embarked on national ICT roll out programmes. In some countries, these programmes include equipping and resourcing public libraries with ICT (Farrell, Shafika, 2007).

Although ICT opens doors to new library roles in Africa, it also brings challenges to library professionals, who must adopt, learn to use, manage and maintain new technology. They must deal with high expectations of library users and the authorities about the value and potential of ICT. Failure to meet expectations leads to increased insecurity of librarians and dissatisfaction among users.

To help libraries use ICT to its full potential, the EIFL¹ Public Library Innovation Programme (EIFL-PLIP) has developed a capacity-building framework for public librarians that aims to support integration of ICT into new public library services that meet local community needs. The framework grew out of EIFL-PLIP's experience in Africa², and consists of four modules (total 88 hours of training) covering such topics as advanced computer literacy, e-resources and searching, project management for new library services, and advocacy. The framework has been piloted in three countries where there has been some progress in government supported ICT roll out to public

¹ EIFL (Electronic Information for Libraries) works with libraries to enable access to digital information and knowledge through libraries in developing and transition countries. More at: www.eifl.net

² From 2010-2014 EIFL-PLIP supported more than 20 projects in African countries, aiming to develop innovative library services. More at: www.eifl.net/plip

libraries: Kenya³, Uganda⁴ and Ghana⁵. This paper presents results and impact of this initiative, discusses training methodologies and lessons learned. The paper also reflects on the effectiveness of the training programme in encouraging adoption of ICT in public library services in Africa.

Keywords: public library, innovation, Africa, capacity building.

Introduction

Information and communication technologies (ICTs) have opened doors to vast amounts of digital information resources, services and tools. Libraries have proved to be effective and efficient hosts of sustainable public access to ICT, because they are able to offer three essential ingredients needed to ensure benefits for all in the digital era: "infrastructure, content, and access" (Newman, 2007). International studies (Quick, Prior, Toombs, Taylor, Currenti, 2013; Sey, Coward, Bar, Sciadas, Rothschild, Koepke, 2013) have shown that ICT-enabled public libraries can deliver a wide range of positive impacts, including providing ICT access and training to poor and marginalized communities; improving ICT literacy skills; supporting job searches; providing access to and supporting formal and informal learning online; enabling people to connect with each other, and many others. However, in the developing world, where the need for education, health, agriculture, other critical information and info-mediatory assistance is greatest, and the digital divide remains a challenge, public libraries are not yet being used to full potential.

Adoption of ICT especially lags behind in sub-Saharan Africa (Paua, 2004). To bridge the digital gap, many African governments have embarked on national ICT roll out programmes. In some countries, these roll out include equipping and resourcing public libraries. Although this creates new opportunities for libraries in Africa, it also brings challenges for library professionals, who must adopt, learn to use, manage and maintain the new technology. They must deal with high expectations of library users and the authorities, about the value and potential of ICT. Failure to meet expectations leads to increased insecurity of librarians and dissatisfaction among users.

In response to this situation, EIFL developed a capacity building programme for public librarians, focused on ICT and e-literacy skills for librarians; training skills to enable librarians to provide ICT and e-literacy training in their communities, and advocacy and communication. The capacity building programme has been tested in Ghana, Kenya and Uganda. This paper discusses the training programme and its results.

³ In Kenya, the Communication Commission of Kenya (CCK) provided funding for establishment of 'eResource centres' in 10 Kenya National Library Service (KNLS) branch libraries. The CCK project included purchasing 10 public access computers for each library, internet connections and basic ICT training for librarians.

⁴ In Uganda, the Uganda Communication Commission's Rural Communications Development Fund, which supports access to internet and computer projects in rural areas, plans to equip 10 public libraries that currently have no access to ICT with computers and internet connections.

⁵ In Ghana, through the Library Connectivity Project, Ghana Investment Fund for Electronic Communications (GIFEC) equipped 10 regional libraries and 26 district public libraries with computers, internet and provided basic ICT training.

ICT adoption and use in African public libraries

The transformative power of ICTs in developing countries is constrained by limitations of connectivity infrastructure, and lack of ICT skills in the workforce and general public. A recent World Bank survey of ICT in education in Africa found positive developments with respect to ICT adoption, concluding, that the process of adoption and diffusion of ICT in Africa is shifting from donor-supported and NGO-driven small-scale pilot projects towards a new phase of systemic integration informed by national government policies (Farrell, Shafika, 2007). In several African countries, government information infrastructure and communications development programmes that aim to provide more equitable access to digital information resources and services for poor urban and rural populations include public libraries (among other institutions). However, EIFL research into perceptions of public libraries in six African countries found that library stakeholders and the general public do not yet associate public libraries with ICT, innovation or community development. The EIFL study also found that the majority of public librarians did not believe they had sufficient capacity to use ICT effectively or to offer ICT-based services (EIFL, 2011). These two findings suggest a need for advocacy to raise awareness about and recognition of the role that African public library can play in the digital era, and for training to enable public librarians and library managers to act as agents of digital inclusion and development.

Literature research shows a gap in studies about availability and use of ICT in African public libraries. A 2004 study of 22 public library services in ten English-speaking African countries indicates great disparities in the level of public access to computers offered by libraries in the different countries, as well as within each country, concluding that there was a need for more funding and appropriate training. This study also found that due to lack of funds, many public libraries in Sub-Saharan Africa find it difficult to implement ICT projects, and this results in poor ICT services (Chisenga, 2004).

Research in Nigeria echoes findings in other countries, that most libraries say they do not have ICT, or ICT to meet users' needs. As a result, very few library staff receive ICT training (Emojorho, 2011). A survey of public library users in Nigeria, suggests, that lack of internet and ICT services is a major factor of users dissatisfaction with public libraries (Ikenwe Iguehi, Adegbilero-Iwari, 2014).

These studies suggest that in Africa, the library community might accelerate improvements in libraries' position and readiness to satisfy emerging user needs and demands for new technology-based services through:

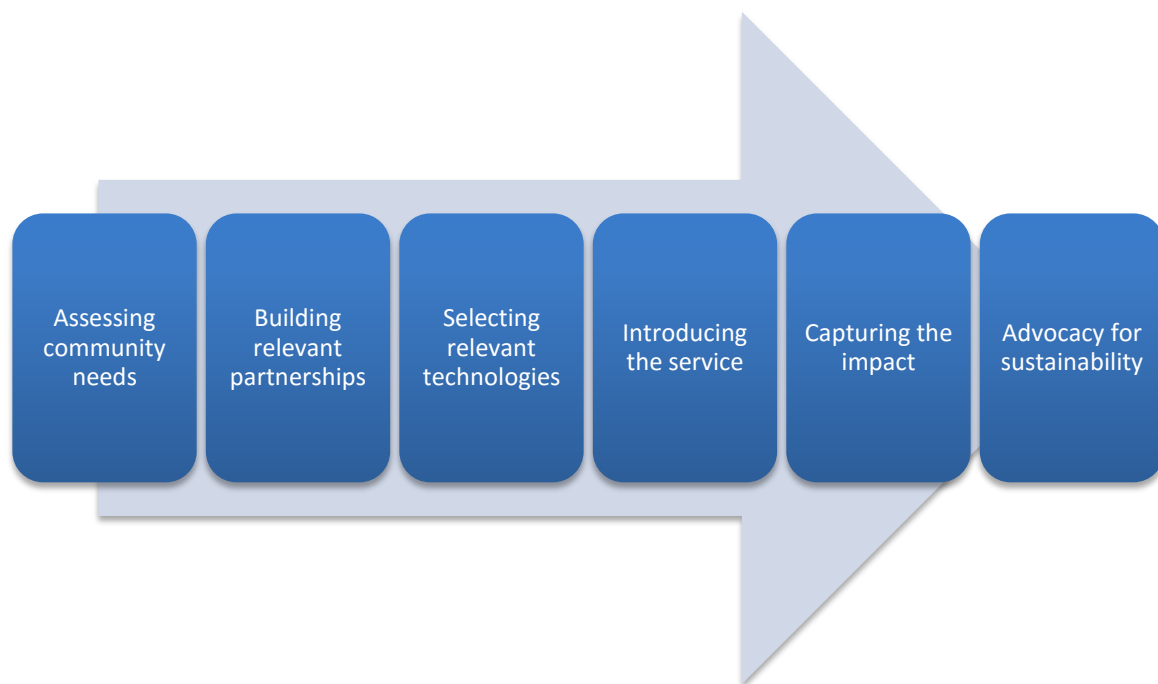
- focusing on advocacy to transform public library perceptions in the society, and to convey clear and quantified benefits of ICT equipped public libraries in terms of tackling digital divide and low ICT literacy levels;
- making staff ICT skills and service innovation training an integral part of any programme or project that aims at bringing ICT's into libraries, to foster emerging new and relevant services.

Encouraging technology based, new services in African public libraries

In 2009, with a grant from Bill and Melinda Gates Foundation, the international not-for-profit organization EIFL (Electronic Information for Libraries, <http://www.eifl.net>)

initiated the Public Library Innovation Programme (EIFL-PLIP). The programme aims to advance community development through supporting introduction of innovative public library services, and to demonstrate the contribution that public libraries can make in building strong communities. Since its launch in 2009, EIFL-PLIP has supported initiation of more 21 innovative public library projects in eight African countries. Most of these projects have adapted to become sustainable library services.

Through working with libraries on these projects, in addition to experience gained in working with similar projects in Asia, Europe and Latin America, EIFL-PLIP developed a model for introducing new services in libraries. The model, set out in Picture 1. EIFL-PLIP new service development model, below, provides steps for new service development, from recognizing community needs to taking action; from achieving outcomes to impact evaluation and resourcing sustainability. The steps include advocating for the library to play a greater role in the development of the community, and raising awareness about the impact of its services in the community. It is worth noting that the whole process of new service development for the library project team is also an intensive learning in practice experience that contributes to library capacities and motivation to innovate.



Picture 1. EIFL-PLIP model of development of innovative services in public libraries.

Lessons learned by EIFL-PLIP in supporting ICT-based projects at public libraries suggests that there are at least five factors that are essential for library service innovation to be truly successful and valuable to the community:

- Understanding of community challenges (as opposed to challenges of public library) and accurately defining local needs and gaps in support and services. This enables the library to focus the service on important local issues.
- Assessment and selection of relevant and affordable technologies and tools to meet the identified community needs.
- Capacity building of library staff, so that they feel confident and competent to assist and train library users to take full advantage of the new tools, services and resources.

- Selection and, if needed, repackaging and making available digital content relevant to local community needs.
- Capturing evidence and impact of new library services, and using this evidence to advocacy for funding from the government, and mobilizing community support to sustain technology-enabled services (Petuchovaite, Tamakloe, 2014).

In 2014, EIFL-PLIP conducted a study into how and why public libraries innovate. Findings suggested that a key motivating factor is librarians’ wish to make the library more relevant to the community. This finding indicates that notions of community service are important to librarians. Training that develops ways of understanding of community needs, eliciting community feedback and capturing the impact of new services in the community would therefore be of value. The pilot study also found that public librarians are inspired to innovate by success stories about relevant, adaptable innovative services offered by other libraries. Through networking and knowledge sharing, public librarians engage in peer-to-peer activities and get necessary support and motivation to try new things (Femenía, Sadunisvili, Lipeikaite, 2015). This turns into practical recommendation for library community to set conditions that enables knowledge sharing between the public libraries within the country, as well as across the regions in Africa.

EIFL-PLIP’s experience in Africa and other continents, and findings of the various studies cited above, formed the basis for development of a capacity-building programme for public librarians in Africa, aiming to foster development of new ICT-based services.

EIFL-PLIP Capacity Building Programme for public libraries in Africa

The curriculum of the capacity-building programme was built around four topics: ICT skills; internet resources and online research; new public library service development, and communications and advocacy (see table 1 below).

Table 1. Curriculum topics of EIFL-PLIP Capacity Building Programme

Advanced ICT (40 hours)	Internet resources and searching (8 hours)	New public library services (24 hours)	Communication, advocacy and awareness raising (16 hours)
<ul style="list-style-type: none"> • MS Office programmes, like: Word, Excel, PowerPoint. • Using email, internet and social media tools • ICT training skills; developing a community ICT training programme 	<ul style="list-style-type: none"> • Types of e-resources • Search strategies online • Local and regional e-resources, relevant to local communities 	<ul style="list-style-type: none"> • Community needs assessment • Management of library projects • Fundraising • Partnerships • Proposal writing • Impact evaluation 	<ul style="list-style-type: none"> • Communicating with different audiences • Advocacy for new library services • Working with media • Building and managing advocacy plan

The capacity building programme was piloted in Ghana, Kenya and Uganda. These three countries were selected because of the presence of government initiatives to equip libraries with technologies⁶. From June 2014 to March 2015 EIFL worked with local partners with responsibilities or/ and experience in public library development to customize the core curriculum making it relevant to local needs. EIFL-PLIP's local partners were TechAide⁷ and Ghana Library Authority⁸ in Ghana; Kenya National Library Service⁹ in Kenya, and Maendeleo Foundation¹⁰ in partnership with National Library of Uganda¹¹ in Uganda. In Kenya the training was boosted by the support of the UNESCO Regional Office for Eastern Africa and partnership with Goethe-Institut Kenya.

The process of customization of the training in each pilot country started with a skills audit – a questionnaire, based on self-assessment methodology. This instrument helped to collect important data about the current level of public librarians' capacity and confidence in areas like ICT, project management, advocacy, etc. Willingness and interest by the librarians to start innovative services was also an important element in selecting potential trainees.

Trainers in the programme included EIFL-PLIP team members and staff from grantee libraries from Africa, international and local experts in particular topics. Building on the audit results, the EIFL-PLIP team worked with trainers, adapting content to the public library environment in particular country. Local partners also were contributing to the curriculum development throughout the whole process.

Customized modules were delivered in a series of intensive and interactive workshops. Each workshop lasted from 2 to 5 days, with breaks of 1-2 months in between each workshop. During these breaks, public librarians were encouraged to work on exercises, applying new knowledge and skills in real life situation of their libraries, and to continuing learning through practice.

All in all, the capacity building programme, including the joint planning process with the local partners, content customization and delivery, as well as the impact assessment, took around 12 months.

⁶ In Kenya, funding was given by Communication Commission of Kenya to establish 10 'eResource centres' in Kenya National Library Service (KNLS) branch libraries. The project included purchasing 10 public access computers for each library, internet connections and basic ICT training. In Uganda, Uganda Communication Commission's Rural Communications Development Fund that supports access to internet and computer projects in rural areas has committed to equip 10 public libraries with computers and internet connections. In Ghana, through the Library Connectivity Project, Ghana Investment Fund for Electronic Communications equipped 10 regional libraries and 26 district public libraries with computers, connectivity and basic ICT training.

⁷ TechAide is a technology social enterprise that aims to provide appropriate technologies and develop human capacities to unleash the potential of individuals, communities and institutions. More at: www.techaid.net

⁸ The Ghana Library Authority is a public library facility established by the Government of Ghana to support formal and informal education through the provision of reading materials such as books, periodicals and other non-book materials. More at: <http://www.ghla.org.gh>

⁹ Kenya library system is centralized under Kenya National Library Service (KNLS), a statutory body of the Government of Kenya established to develop, promote, establish and equip libraries in the country. More at: <http://www.knls.ac.ke>

¹⁰ Maendeleo Foundation is an NGO which is helping build a productive computer services industry in East Africa, connecting people and information using the latest Internet technologies, and thereby increasing personal incomes and boosting the local economy. More at: <http://www.maendeleofoundation.org>

¹¹ The National Library of Uganda (NLU) is mandated to oversee and support their proper management and utilisation by providing policy, standards and guidelines. More at: <http://www.nlu.go.ug>

Impact of the training

The capacity building programme reached 84 public librarians from 80 libraries in Ghana, Kenya and Uganda. It makes 50 percent of all public libraries in the three countries, and practically all public libraries equipped with ICT. To evaluate the training we have used two self-assessment¹² surveys: 1) post-training evaluation after each module (Survey 1); 2) post skills audit, performed in 4-6 weeks after delivery of the last training module (Survey 2). Additionally, the assessment was complemented by informal feedback and experience reflection sessions at the beginning of each new training workshop (discussion; reporting).

The Survey 1, together with observations made by trainers and local partners in their post-training reports, allowed us to track short-term impact of the training. Results of this survey showed significantly improved trainee's confidence as self-assessment ratings almost doubled in most of the topics covered in the curriculum. At the end of the last module in all three countries, about 90% of trainees believed they were well prepared to implement new services. The highest improvement was recorded in learning about the 'ICT training for communities', including knowing how to develop training programmes for different target groups, e.g. disadvantaged children and youth, women, farmers, etc.

Medium-term impact of the training was assessed through the Survey 2, which mainly focused on practical steps, taken in the libraries as a result of the training. With regards to ICT, after the training in all three countries public librarians started using ICT more frequently and with more confidence. They acknowledged improving deployment of ICT for basic tasks, like using word processing for reports, but also doing better in searching the Internet and providing guidance on e-resources.

The evaluation showed that, in terms of launching new services, most often, librarians have started with the provision of ICT skills training both to their community members and to their fellow librarians. In some cases trainees specified providing ICT skills training targeted at certain community groups, such as women and girls, school dropouts, farmers, etc. Feedback revealed that many also started offering guidance on Internet search in specific areas, e.g. agriculture or health information. Below are some quotes from open-ended questions, which illustrate new services, started in libraries (the language has not been edited):

"I mostly engaged primary going children whom I realized only use the computers to go to the internet to visit the social sites alone, like Facebook, Twitter etc., so I helped them realize other uses of the internet. I helped them search for resources and information concerning their curriculum-based information." - Beatrice Nani Salai, Kwale community library, Kenya.

"We started new Service, ICT 4 Girls. This programme was introduced to teach girls in some selected Junior High Schools basic computer skills. The training is based on their School I.C.T Curriculum. We also prepare them for the Basic Education Certificate Examination." - Patrick Kweku Akorli, Northern Regional Library, Ghana.

¹² The limitation of this method is that due to different reasons self-ratings can be inflated compared to trainer assessments or test scores. Nevertheless, this method was chosen because we had no intention to create stressful atmosphere and formally assess librarians' performance, but rather to encourage public librarians to identify their strengths and abilities to perform specific tasks, related to service innovation, and defining professional development needs.

“Search for information for users about various subjects e.g. Information on elections, pests and diseases and pin then information on the notice board. This is attracting more users.” - Nakafeero Josephine, Masaka Public Library, Uganda.

Assessment data show that the training also empowered public librarians to be more active in reaching out to different stakeholders and their communities. After the training, 2/3 of them implemented some kind of advocacy or awareness raising actions. These were mainly aimed at different community groups, local or district government officers and local media. In just a few months, they were reporting some concrete results, such as increased library membership and use. Below are a few quotes from open-ended questions to provide examples of advocacy actions, taken by trainees (the language has not been edited):

“We organized a meeting with the municipal chief executive and the municipal coordinating director for creating awareness of the vital role library and ICT laboratory play in the municipality.” - Yakubu Sibdoo Osman, Asunafo North Municipal library, Ghana.

“I have visited a number of schools, both primary and secondary, I have also visited county offices, informing all about the new services the library is offering through internet. We have received very many users coming in groups hence increase of library membership.” - Kateta Eunice Ngina, Werugha Community Library, Kenya.

“We have had a radio talk show and we invited the community to come to the library and start learning how to use ICT to improve their lives through farming and other aspects and also to send us their children to come to the library to learn computers. We have gone to the two radio stations and invited the farmers to come to the library and learn the new technologies pertaining ICT to improve in their farming.” - Budhugo Mawazi and Kobusinge Doreen Olive Rose, Jinja Public Library, Uganda.

About half of participants of the training programme started fundraising by submitting some kind of requests for support or proposals to different organisations. Funding requests, aimed at improvements to library and ICT infrastructure and community ICT training, were directed to local governments, private companies, NGOs, private donors.

We clearly registered an impact on librarians’ attitudes and perceptions towards ICT’s in libraries. They said the training has opened their minds and provided ideas on how ICT could be integrated in the library work. They also felt proud and confident in helping colleagues and users to get new skills and knowledge, and it helped to realize the importance of tailoring services to community needs. Below are some quotes from open-ended questions, outlining changes of trainees’ perceptions and attitudes (the language has not been edited):

“The training has pushed me to think out of the box. I used to limit the library service just in the library but I now know the Library can be moved to the community and participate in social affairs”. – Opio John Peter, Tororo Municipal Public Library, Uganda.

“It has made me open minded and work with everyone around me in corporate partnerships or individual. It has made me a librarian of the 21st Century since I can retrieve information I need or needed by my customers by the search engines and into University libraries online. My work has become enjoyable since the user's can trust me to satisfy their various needs”. - Wambui Elizabeth, Meru District Library, Kenya.

“I have learnt new ways of talking to my patrons, how I relate to them, how I deal with my stakeholders and more importantly how my knowledge about conceiving an initiative, identifying and selling it to my target audience has help improve my life drastically as a person and a librarian”. - Osafo George, Akim Oda Library, Ghana.

Trainers and local partners in their post-training reports to EIFL-PLIP shared an important observation that the training programme provided a rare opportunity for public librarians to network and share experiences with each other, and to learn from their colleagues from the other countries in Africa. In addition, they emphasized the importance of continuing this process in future, finding ways and tools to facilitate knowledge sharing and keep librarians up to date with emerging trends in innovative services in their countries and in the African continent, especially if it concerns the initiatives that can be easily adopted or copied in other public libraries. Another interesting recommendation by both trainees and local partners was to extend the training to the other groups that have a share in public library service innovation, especially to library directors (managers), also such stakeholders as government decision makers.

Conclusions

The process of adoption of ICT is accelerating globally, and public libraries play an important role in contributing to digital inclusion, especially of poor and marginalized communities. Still in developing world public libraries may lack resources and infrastructure to take on new roles and meet pressing demands of digital era. It is also true that libraries in developing countries are increasingly getting computers and the internet to provide public access to their communities. Nevertheless, there is insufficient attention paid to librarians’ capacity building to become true ICT intermediaries that support social and economic change.

Results of the EIFL training programme, as tested in three African countries, suggest it is an effective way of filling skills gaps, and building confidence and motivation of public librarians, preparing them to develop new and innovative public library services that use ICT to meet community development needs. The programme, based on past EIFL-PLIP experience in supporting innovative service development in developing and transition economy countries, took a holistic approach – adding such subjects as e-resources, project management for new library services and advocacy to the technology related competences development.

Two-tier evaluation of training programme indicates that the main methodological factors contributing to success of the training were customization to meet local libraries’ needs; the combination of foreign and local trainers, and the interactive and practical nature of the training. Knowledge sharing between librarians proved to be essential, and has to be continued beyond the training to support continuous innovation and change in public libraries.

Learners and trainers feedback and evaluation suggest it can be adapted for other countries in Africa that are looking for ways of strengthening public libraries’ potential to bridge the digital divide. For a broader scaling-up in Africa, EIFL-PLIP will seek strategic partners, including local library authorities as well as regional and international library related organisations active on the continent. Such a training, supporting ICT based service innovation, needs to be part of a continuing librarians’ education curriculum to ensure that

potential of the investment into ICT in libraries is fully explored and promises of technology use to boost individual and community development in Africa become truth.

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