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2016-06-21
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BUILDING AN ONLINE INDIGENOUS KNOWLEDGE LIBRARY ON CULTURE, ENVIRONMENT AND HISTORY: CASE STUDY OF ELIMU ASILIA

by

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Paper for the 3rd International Conference on African Digital Libraries and Archives (ICADLA-3)

27th-29th May 2013, Ifrane, Morocco

Abstract

Kenyan libraries and information centres are inadequately equipped with local indigenous knowledge (IK) content to contribute to global digital knowledge economy. Scarcity of community stories and information on the web undermines the role of librarians and other information workers, denying local communities opportunity to participate in the development of local content about their communities and encourage them to use and appreciate local library services. All over the world, indigenous knowledge has been recognized as distinct, legitimate, valuable and vulnerable system of knowledge that requires appropriate skills to handle and manage. In Kenya, like most African countries, events and accounts were transmitted orally from one generation to another. The data/information was hardly documented. This paper presents a case study of 'Elimu Asilia', a participatory platform for developing local content where National Museums of Kenya librarians working with researchers and volunteers interact with local communities including children in the collection, preparation, preservation, sharing, exchange and dissemination of IK on culture, environment and history for memory, national sustainability and eco-social development using information communication technologies. It is envisaged that this platform will contribute towards the reduction of digital divide, sharing of community IK and promote global online communities for indigenous knowledge.

Introduction

Kenyan libraries and information centres are not well equipped with local indigenous knowledge (IK) content to contribute to global digital knowledge economy. Scarcity of community information on the

web especially IK stories and information undermines the role of librarians and other information workers in Kenya and denies local communities a chance to participate in the development of local data/content about their communities and encourage them to use and appreciate online library services (via the internet). Greyling and Zulu (2010: 33) share the same sentiments that web 2.0 is about community collaboration and usability. This situation is changing thanks to improved internet connectivity and decreasing connectivity costs in Kenya brought about by increased mobile phone usage, broadening the role of librarians in the preservation of community memory in the post modern or current digital age.

On the African content, Greyling (2012: 400) states that one reason for scarcity of African content on the web is lack of capacity to record, transfer and disseminate African community stories and information. A browse through the web established that only few libraries and information centres hold IK in their collection. A web search conducted to establish how many libraries or information centres hold Indigenous knowledge in Kenya showed that the Kenya Resource Centre for Indigenous Knowledge (KENRIK) based at the National Museums of Kenya (NMK) was the only outstanding centre that popped up on the screen, in addition to the 'Elimu Asilia' blog page. This was a clear indication that local IK content in Kenya is very low, retarding the dissemination of indigenous knowledge among Kenyans.

'Elimu Asilia' is the Swahili equivalent for indigenous knowledge (IK). It refers to the knowledge acquired through accumulation of experiences, experiments and intimate understanding of the environment by the local Kenyan people. Part of this knowledge may have been published in print/hard copies and available in libraries. This knowledge is derived from direct handing over from generation to generation, gained and modified by community members through the daily experience in their diverse native environments. There is need to transform orally transmitted knowledge into other formats for preservation and ease of access to a wider audience. Elimu Asilia which is still at its pilot stage will act as a common platform where NMK librarians, information technology (IT) specialists, NMK researchers and volunteers interact with local communities and children in the collection, preparation, preservation, sharing, exchange and dissemination of IK on culture, environment and history for the memory of our nation for sustainable and eco-social development. IK is driven by community dependence on traditional knowledge and practices in sustainable exploitation of their environment, preserving their culture and reconstructing their history, through time and across generations. The practice of preserving community memory involves collecting orally transmitted local content (indigenous), processing and making it available and accessible for free online. Advancement in technology has revolutionized the process which was previously done through traditions, customs, stories, myths among others. Story telling was the most

common way of transmitting and preserving knowledge about society (such as history, nature and others) to young children by elders.

Aim and Objectives of Elimu Asilia

The NMK librarians countrywide have experienced the desire and demand to use ICT based information resources by their clients comprising of local community in addition to other information seekers and IK gap in the collections. This necessitated the creation of Elimu Asilia whose aim is to raise awareness and promote appreciation of all aspects of indigenous knowledge covering culture, environment and history and enhance its collective acquisition, preservation and availability, access and use in digital format.

Objectives

The main objective of Elimu Asilia is to create an electronic platform for accessing Kenyan Indigenous Knowledge (IK) on culture, environment and history for the memory of the nation. The platform will endeavour to:

- Capture, collect and disseminate community memory on culture, environment and history for the memory of our nation, for sustainability and socio-economic development through community participation
- Process the knowledge and make it available digitally online through the museum libraries and websites
- Encourage community participation and ownership of digitized resources and promote knowledge sharing; and
- Increase community IK full presence on-line and community exposure to the online tools for creating and retrieving their own knowledge

Vision

The vision the 'Elimu Asilia' is to be the best online platform for the preservation of indigenous knowledge on culture, environment and history including data collection, processing, archiving, publishing, sharing, management and dissemination.

Methodology

Elimu Asilia platform uses a participatory approach to reach the local communities through the already established NMK regional libraries and information centres countrywide which directly link up with local communities and cultural groups. The librarians, volunteers and NMK researchers who are in constant contact with the various local communities make arrangement to talk to the elders and collect stories.

Where the elders cannot be reached, children and volunteers who come to the library or visit museum are asked to tell a story or a memorable natural structure near their home. Traditionally in some communities, young people especially ladies do not directly talk to the elderly people, the volunteers who are trusted and known to them have to accompany the librarians and do the talking. However, it is explained in advance to the volunteer how to interview the elders while collecting the stories. At times the community members are invited to the library to develop the story on a computer. The communities work with the librarians to edit the stories. The stories are collected as hand written scripts, and with the assistance of the librarians, communities are assisted on the computer to type. The voice recorded stories are transcribed onto CDs/DVD by NMK audiovisual personnel. The scripts are sent via email to the project coordinator in Nairobi where they are further edited before being uploaded to the blog page by the IT specialist. Illustrations are captured using mobile phones and digital cameras and either sent with the text or separate via mobile phone, smart phones or by email or on CDs/DVD to the coordinator and IT specialist.

Contributors

The contributions so far collected are voluntarily given by community members and they comprise personal experience and community history of customary practices. In their methodology, Greyling and McNaulty (2012:402) had contributors ranging from personal and community histories to customary practices, living experiences and historical environments and people voluntarily submitted information for web publishing. Articles are released on the web with the owners' consent. It is expected that the use of Contributors' articles on the web is within Nagoya protocol and the Creative Commons License. Of interest is the push by the communities to have their contributions uploaded on the web, and the continual follow-up on the status of their contribution ensures that they are uploaded appropriately.

Data Management

Stories are uploaded and preserved online on a blog page by IT specialist working at NMK. The content of this blog will be migrated to a website once the pilot phase is over. The choice of a blog during the pilot phase was informed from the need of an open source digital medium that is cost effective (free) for hosting content and widely acceptable and accessible.

Technology

The advancement in technology in the recent past has enabled and eased digital content/or collection development. According to Rowley (2003) this has prompted a shift from collection development to collection management in libraries. Elimu Asilia uses Google+ 1 Open Source software for archiving of

information using cloud computing. The information is captured using different mediums and digitized using a computer system.

Embracing new technology has aided Elimu Asilia to generate exchange, share and disseminate IK easily and faster as anybody in any location in the world can easily access the blog space and indulge in its captivating content. Access is not limited to physical location or equipment, but thanks to technology, any internet enabled device such as mobile phones and palmtops can easily and practically access the blog from any location, irrespective of equipments or physical investments.

The blog page is made interactive and encourages comments which positively act as a feedback providing authentication of the blog content. This is a very useful interactive tool for information generation, validation, dissemination and feedback. The response is used to increase the quality and relevance of the blog.

Results

The pilot phase has collected and archived 33-articles on culture, history and environment, with most articles being focused on culture and history. Child naming is captured more than once from stories of the Mijikenda (especially the Digo and Giriama), Luo, Kamba and Taita, while, traditional marriage and wedding knowledge has been collected from the Kamba, Giriama and Nandi. Results on environment are reflected in three articles including the Ol Doinyo iigoon - the unique breast Mountain Mount Elgon and wood carving in Ukambani among others. The following are some of the stories on the blog about culture:

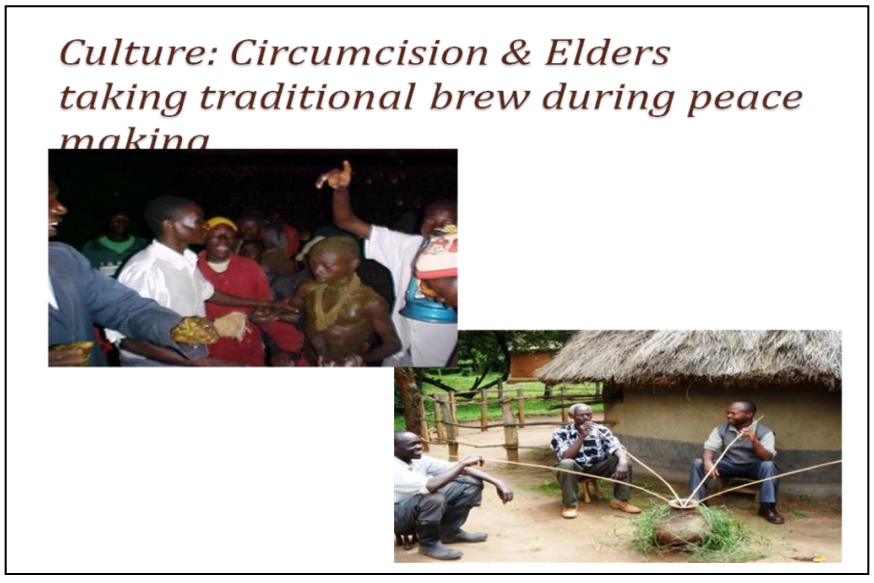


Figure 1. (source: www.elimuasilia1.blogspot.com)

Page Views

Google+ software gives statics for Today, Previous day, Last month and All time. A comparison of page views statistics and audience of Elimu Asilia on 25th March 2013 and 31st March 2013 were as follows:

Table 1. Statistics on Page Views

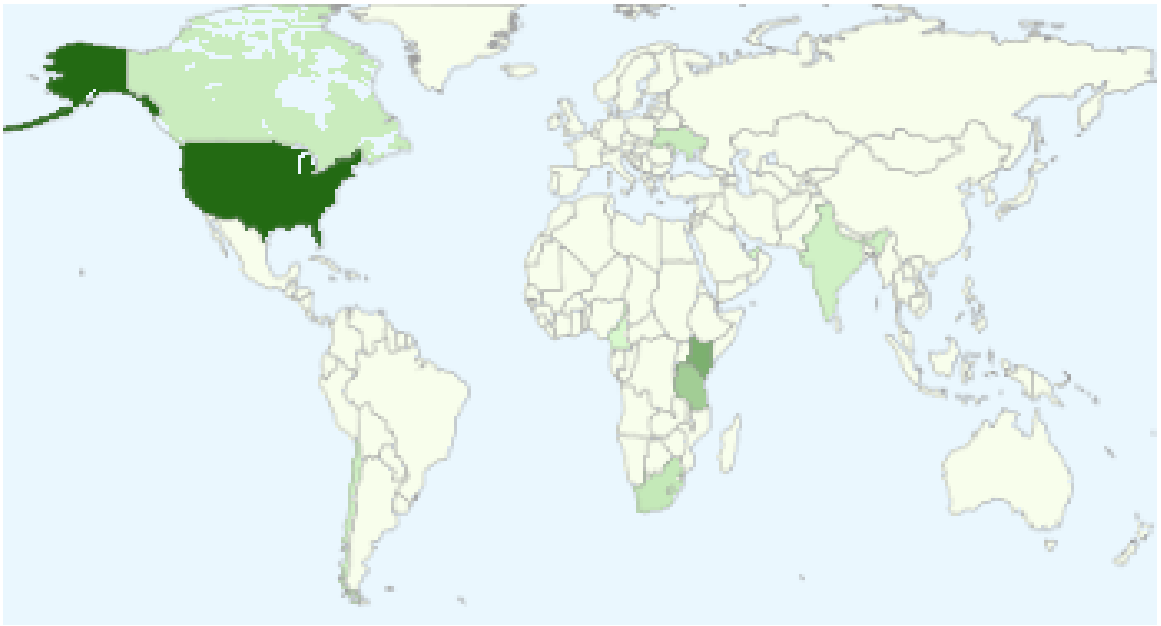
Page Views on 25th March 2013	Number		Page Views on 31st January 2013	Number
Today (25th March 2013)	10		Today (31st January 2013)	6
Yesterday (24th March 2013)	40		Yesterday (30th January 2013)	18
Last Month (February)	660		Last month (December)	466
All time history	3,591		All time history	2,520

After a period of almost two months statics show growth in visitor numbers who consult the blog for information. At the end of January 2013 the number of visits to the blog was 2,520, while on 25th March 2013 the number shot up-to 3,591. When the two figures are compared then it is clear that people are in dire need of indigenous knowledge. This is an indication of user interest in indigenous knowledge, and the gap that exists in access to IK.

Page Views Worldwide

It was established that indeed Elimu Asilia blog is viewed by information seekers from various countries all over the world as shown in the following map in green.

Figure 2. Worldwide Page Views



Source: http://www.blogger.com/blogger: Elimu Asilia – Overviewstats

Another approach was done to test whether Elimu Asilia blog page can give statistics on page views by country. The result again showed that indeed Elimu Asilia blog is viewed by information seekers from various countries. A comparison of page views statistics was done to establish which countries visited Elimu Asilia on 25th March 2013 and 31st March 2013. It was found that there was some variance in the visits from various countries as shown below for a period of two months:

Table 2. Page Views by Country

25th March 2013			31st January 2013		
Country	Number		Country		Number
United States	43		United States		28
Kenya	109		Kenya		14
Tanzania	5		Tanzania		11
Italy	4		Russia		6
France	3		Ukrain		4
Switzerland	2		South Africa		4
Cameroun	2		Canada		3
China	2		Chile		2
			India		2
			The Netherlands		2

Towards the end of March 2013, there was growth and variance in visits to the blog. Kenya had 109-visits followed by United States 43-visits. This was an indication that even Kenyans were curious to read local content on the internet and it was also noted that there was shift in usage where Kenya surpassed United States in the number of hit on the site. The number of hits from Tanzania dropped from 11 in January to 5 in March. There were new visits from Italy, France, Switzerland, Cameroun and China. It was noted there were no hits from the countries that had visited the site in January 2013.

In January 2013, four months after setting up the blog, most page visits were from the United States where twenty eight visits were recorded. This was followed by Kenya, and 14-visits were recorded; while Tanzania had 11-visits followed by Russia with 6-visits. South Africa and Ukrain each had 4-visits; while 3-visists were recorded from Canada. Chile, India and The Netherlands each had 2-visits to the blog.

Page Views by Browsers

When a web management tool was applied on 30th January 2013, the number and percentage (%) were not taken since the curiosity was to establish which browsers were being used. However, on 25th March 2013

the same was repeated and it was established that pageviews of Elimu Asilia were done using the following browsers:

Table 3. Page Views by Browsers

25th March 2013	Number	(%)		31st January 2013		Number	(%)
Internet Explorer	49	16		Internet Explorer		Not taken	None
Chrome	49	20		Chrome		"	"
Opera	35	14		Opera		"	"
Firefox	102	41		Firefox		"	"
Mobile Safari	5	2		Mobile Safari and Version		"	"
NokiaBrowser	2	<1					

Results show that during the month of March, most visitors (102) used Firefox browser to visit Elimu Asilia blog; while Internet Explorer and Chrome browsers were used by 49-visitors, followed by 35-visitors who used Opera during the same period. Less than 10-visitors used Mobile Safari and Nokia Browsers. This is an indication that Google+ software allows the use of various ICTs to search the blog.

Page Views from Referring Sites

The following is a tabulation pageviews by referral sites:

Table 4. Site Referrals

Page Views by Site Referrals	Number
www.google.com	9
www.google.co.ke	7
www.google.com.tz	4
www.google.ca	3
www.google.co.uk	3
www.search.babylon.com	2
www.google.cl	2
www.google.co.in	2
www.google.com.za	2
www.goethe.de	1

Most referrals to the blog come from google.com site and or google search engine is used by most information seekers.

Page Views by Operating Systems

It was further established that page views were done using various operating systems as follows:

Table 5. Page Views by Operating System

on 25th March 2013	Number	(%)
Windows	153	78
Linux	19	9
Android	7	3
Macintosh	6	3
iPhone	3	1
Nokia	2	1
SymbianOS/9.3	2	1
BlackBerry	1	<1
Other Mobile	1	<1
iPad	1	<1

Windows was found to be the preferred operating system, with 153 hits representing 78%. Linux and Android were used by 19 and 7 visitors respectively.

Search Keywords

The Blog was also tested on the use of keywords to make a search on 31st January 2013 and on 25th March 2013. The following were the findings:

Table 6. Search Keywords

on 25th March 2013	Number		on 31st January 2013		Number
Mambrui (24 Mar 2013)	17		Majani ya mnazi ndio mkunazi		2
Sinendet, a Ceremonial Plant... (15 Aug 2012)	14		Sinendet plant		2
Mijikenda circumcision, Child naming.. (1 Sept 2012)	14		How to prepare 'mkate wa mofa'		1
dawa za Miti Shamba (9 Nov 2012)	9		Mapishi mkate wa tambbi		1
Kadzora, a delicacy among the Mijikenda 21 Mar 2013	8		Matobosha		1
			Mijikenda ladies		1
			Nandi culture song for circumcision		1
			Omunyu musherekha		1
			Unga wa mkunazi		1

In March 2013, the most searched article was on the history of Mambrui with 17-hits, followed by Sinendet, a Ceremonial Plant and Mijikenda circumcision, Child naming with 14-hits each. Those who consulted the article on traditional medicine plants 'dawa za Miti Shamba' received 9-hits; while Kadzora, a delicacy among the Mijikenda had 8-hits.

Bloggers Published Comments

Out of the 33-published stories, only 4-comments have been posted on the blog page directly by information seekers who have visited the page. The comments are positive in nature, with one blogger appreciating and being proud of the Mijikenda people without hiding his pride for the Malindi District Cultural Association. One visitor only known as Francis was grateful for the useful knowledge on the history and uses of the Lesso (Kanga). Another anonymous visitor who consulted the story on Mti wa Muhina commented that the 'information is useful knowledge that lots of people do not know'.

Challenges

During the data collection in the pilot phase, the fieldworkers (i.e. librarians, contact persons and researchers) noted that, although communities were more than willing to provide stories that they would like the global community to learn from, they experienced some challenges on the community expectation. All in all there were positive comments on the initiative; however, the following are the experience so far encountered:

1. People interviewed including the contacts to the local communities expect to be given incentives or paid for their time when the project in its pilot phase does not have a budget of its own
2. Most of the local content generators want to be visited during weekend, whereas the only available time to the librarian is during the week (working hours) not during weekend which the communities prefer.
3. Lack of training on technologies especially on the use of computers, phones and cameras
4. Language barrier which is overcome by contact people. A number of contributors needed language assistance for communication as they were only fluent in their local dialect, which was overcome by the assistance from the community contacts.
5. Content on the blog is organized by date, month and year. The information cannot be classified under history, culture and environment.
6. The blog has low interaction capabilities with various media formats for example in dealing with longer multimedia clips

Lessons Learnt

In this pilot phase, the communities have been very proactive in the generation of IK and are eager to have their stories online. Within this pilot the collected period 33-stories have been archived. The communities have willingly given the stories because they want their names to appear on the web as contributors and to be cited. Immediately a member gave their community story, s/he would start pestering the librarian to have the stories uploaded. This is indicative of communities deferred publishing endeavours, and lack of opportunities to preserve their IK. It is evident that there is a lot of IK out there with communities that is not yet tapped, much as communities are willing to contribute and share their experience with the rest of the world online.

Conclusion

Communities' willingness to preserve their IK in digital format should be encouraged at all costs. Although monetary incentives are not easy to account for in public institutions, other means of incentives like invitation of contributors to workshops can be reverted to so as to encourage or boost morale of would be generators of IK stories to do so. Mobile telephony has the potential to revolutionize the preservation of community stories, and therefore since community members are willingly giving stories, some incentive should be put aside for them.

Way Forward

The results of the pilot phase are an indicative of the thirst for IK worldwide as it is evident that Elimu Asilia blog page is viewed by clients throughout the world. The willingness of communities to contribute stories should not be over-looked. It is therefore, only prudent that the project be scaled-up to cover all communities in Kenya in order to continue collecting, processing and digitally preserving IK for current and future generation. A workshop planned for May 2013 is a worthwhile forum for story contributors to meet each other for purposes of validating their stories, sharing and exchanging ideas as well as giving an input to the project on what and how communities would like to see their stories on the web.

Acknowledgement

I would like to extend my sincere thanks to the Director General, National Museums of Kenya and the Director of Research and Collection for their support and encouragement during the launch of Elimu Asilia initiative. The Goethe Institut in Nairobi financially supported the post-SCECSAL workshop for the planning of Elimu Asilia initiative and has since continued to partner with NMK to give useful support. Sincere appreciation is due to the Elimu Asilia secretariat comprising Agnes Lusweti, Gilbert Busolo, Ruth Adeka, Philemon Ochieng, Brenda Monchari Onyancha, Esther Bosibori Omosa and Albert

Otieno. Mr. Busolo (IT specialist) tirelessly uploaded all the articles as they were received. Many thanks to Mr. Ochieng, a research scientist at the National Museums of Kenya, Department of Cultural Heritage for editing this paper.

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