



Content Development in an Indigenous Digital Library: a case study in Community Participation

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Abstract

Africa and African Libraries and Information Centres are poorly equipped to make a meaningful contribution to the current global digital knowledge economy. Low local content on the Web retards buy-in from local communities into digital resources and inhibits development of digital skills. A library with content of local relevance will encourage communities to make use of library services, especially if they are empowered to participate in development of the content. Public libraries serving ethnic communities whose histories are locked up in written, pictorial and oral traditions are well positioned to provide a platform for public engagement in the collecting and disseminating of indigenous knowledge in the communities they serve. This paper presents a case study in community participation in developing content for a digital library of local indigenous knowledge. Description of the programme highlights interaction between the library, the community and the technology used. Implementation challenges, results and lessons learnt are discussed and benefits to the community pointed out. In providing an online, contextually-based information service to local communities, public libraries in Africa will ensure future-oriented access to cultural heritage resources through 21st century information communication technologies (ICTs). The potential to reduce the digital divide will be enhanced and African communities will be introduced to the global information society.

Keywords: Indigenous digital library, Indigenous knowledge, Community participation, Content development, Indigenous portal, Information Communication Technology

Introduction

Digital information and communication technologies have revolutionised the ways in which knowledge and technical know-how travel around the world. The extent to which information requirements are met by the Internet throughout the world is reflected in usage statistics; the latest figures shows 73.6 % of the population in North America use the Internet; usage in South America is 24.1 % whereas in Africa Internet penetration is 3.6% (Internet World Stats, 2008).

Apart from the problem of accessibility, the global trend of using the Internet for preservation and dissemination of cultural information causes a dilemma for the African information community. While African local content on the Web is very low, cultural heritage remains undocumented due to a lack of capacity to record, transfer and disseminate information. The result is that Africa, and the library and information centres in Africa, are at a major disadvantage in the current knowledge economy and are poorly equipped to make a meaningful contribution to the global information society. Buy-in to digital resources by local communities remains low because of the paucity of local content, which contributes to the lack of digital skills development. Social coherence within communities is deteriorating because the indigenous knowledge is not preserved.

This paper describes a case study in the online preservation of indigenous knowledge resources as an integral part of local public library and information services. The latest information society technologies are used to create a collaborative local indigenous knowledge database. The programme is co-ordinated by the local public library, focusing on custodianship - providing content management, training and support. Ordinary people from the community are actively involved in the development of content, encouraging them to take ownership of the programme and share their knowledge.

Objectives

The main objective of the programme is to create an online indigenous digital library as part of public library services. The library aims to involve local communities to develop the content for this library and in doing so it creates an enabling environment for disadvantaged communities to become part of the global information society through active participation. Short-term goals include access to a digital knowledge resource of local relevance, as well as capacity building of digital and information literacy skills. Long-term goals include provision of an online, contextually-based information service to local communities which will ensure future-oriented access to cultural heritage resources through 21st century information communication technologies (ICTs). By establishing a sustainable, digital library service of local relevance which is in step with contemporary public library services elsewhere in the world, African Public Libraries will become part of the global information society.

Why Indigenous Knowledge Content

Indigenous knowledge is part and parcel of the culture and history of any local community. Development agencies “need to learn from local communities to enrich the development process” (World Bank, 1998). Indigenous knowledge also affects the wellbeing of the majority of people in developing countries (Ngulube, 2004). Some 80% of the world’s

population depend on indigenous knowledge to meet their medicinal needs and at least 50% rely on indigenous knowledge for food supply (Nyumba, 2006). Indigenous knowledge is indeed the cornerstone for building a unique identity and ensuring coherence of social structures within communities.

Because indigenous knowledge is mostly stored in people's minds and passed on through generations by word of mouth rather than in written form, it is vulnerable to rapid change (Sithole, 2006). Development processes like rural/urban migration and changes to population structure may contribute to loss of indigenous knowledge. Indigenous knowledge faces extinction unless it is properly documented and disseminated (World Bank, 1998). The programme described here enables communities to preserve and manage their own local knowledge in an economically viable and sustainable manner and so create a legacy for future generations.

Why the Library

The public library is an appropriate anchor partner in the programme because of the stability of its position both within the community and within the government structures through which it is established. As part of social services, it is well positioned to ensure free and equal access to information and knowledge (Hedelund, 2006). By virtue of their profession, librarians bring expertise to the programme in the form of information/content management skills (Snyman & Van Rooi, 2006). Local librarians are experienced in social outreach skills and typically enjoy good trust relationships with the communities they serve. By including oral history activities among professional duties, librarians are well-positioned to take the lead in a programme such as this (Du Bruyn, 2003). Apart from gathering new information, librarians should also train and reach out to communities. Story hours should be used to record oral histories. Elderly members of the community should be invited to the library to tell their stories. With the necessary training in oral history, librarians would be able to record the stories to preserve them as oral histories.

The use of computerized information systems can be effective as a system of conservation if they support the maintenance and transmission of knowledge within those communities that developed the knowledge (Mosimege, 2005). Libraries elsewhere in the world have been preserving indigenous knowledge online for many years (e.g. Smithsonian Institution's Center for Folklife and Cultural Heritage (Smithsonian Institution), New York Public Library's Schomburg Center for Research in Black Culture (New York Public Library). These, and similar digitization programmes, are typically run by well funded academic or governmental institutions (Knight, 2008; Armstrong, 2008; Lee & Crichton, 2008).

However, circumstances are very different in African libraries, largely limiting community participation to small elitist groups. The prohibitive cost of documenting indigenous knowledge compels most libraries to establish public/private partnerships to achieve their goal. There are arguably no projects focusing on pervasive community-driven collection and preservation of indigenous knowledge. Current African e-initiatives are largely limited to provision of access to agricultural, health and business information (Chisenga, 2008; Lwoga & Ngulube, 2008; Okello-Obura & Minishi-Majanja, 2008].

The programme described here is in step with global goals as constituted in the African Charter for Popular Participation (United Nations, 1990), the United Nations Social

Development Plan (United Nations, 1995) and the United Nations Millennium Development Goals (United Nations, 2000).

It is also in keeping with the World Summits' on the Information Society (WSIS, 2003, 2005) plans of action, which were developed to achieve the goal of "providing equitable access to information and knowledge for all". From the Geneva Plan of Action (WSIS, 2003), the action lines directly underpinning the programme described are briefly:

- Access to information and knowledge. This concerns policies relating to public domain information, community access points (including such access in libraries), alternative software models (open-source and free software). One of the actions envisaged is the development of digital public library services.
- Capacity building. This covers skills needed for the Information Society, including literacy and "ICT literacy," the use of libraries in e-literacy work and the empowerment of local communities to use ICTs.
- Cultural diversity and identity, linguistic diversity and local content. This action plan focuses on promotion of respect for cultural identity, traditions and religions and dialogue among cultures as a factor in sustainable development. Libraries feature prominently in this plan, most notably their role in providing access to content and indigenous knowledge. By implication the role of libraries is extended to promote cultural heritage, support local content development and to enhance the capacity of indigenous peoples to develop content in their own language.

Why community participation

At the heart of the strategy of community participation lies a respect for cultural identity, traditions and religions, acknowledging community ownership of indigenous knowledge (WSIS, 2003). Members from the community are selected to join the programme as volunteer fieldworkers because they are connected to the source of the information and are the holders of the knowledge that the programme aims to preserve. Indigenous representations are recorded within the context of the local community (Iseke-Barnard & Danard, 2007). The preservation of culture and heritage builds social identity and cohesion and create a legacy for future generations.

Access to useful knowledge of local relevance builds an informed society, while e-literacy and ICT skills are continuously transferred into the community through their own community networks. The digital skills development that is imperative in the strategy not only empowers local library staff but more importantly creates the potential for ongoing capacity building in the use of ICTs among disadvantaged communities. Exposure to wider knowledge, together with enhanced information literacy, promotes knowledge sharing and lifelong learning, introduces people to the global information society, improves knowledge levels and adds value to the programme through creation of economic opportunities.

The programme

The programme consists of three components, i.e. social software technology, the public library, and the community. It is presently running as a pilot project in the greater Durban area in South Africa, using the established, multi-branch public library system consisting of a network of urban, peri-urban and rural libraries within the municipal boundaries. However, as such it is easily adaptable to run equally successfully from a single library, resource centre or community centre, provided Internet access is available.

Social Software Technology

Together with developments in information and communication technologies over the past few decades which have prompted a shift from collection development to collection management in libraries (Rowley, 2003; Lwoga & Sife, 2006), the recent emergence of Web 2.0 technologies is now enabling large-scale collaboration in the creation of online data (Farkas, 2007; Grand, 2006).

In the programme described here, preservation of indigenous knowledge is achieved through establishing a community web portal using Web 2.0 technology. The memory database is embedded in the portal as a wiki (Wiki, 2007), allowing collaborative writing and sharing of content.

While Web 2.0 is all about community and collaboration, it is also about usability. The usability of Web 2.0 technology in this project lies in its strong interactive community aspect: the wiki is used to share ideas, content, images, oral histories and videos between members of the local community.

The ease of use is another attractive feature of social web technology. There is no need to learn HTML, as content can be added in plain text and in any language. In the pilot project English is used alongside Zulu, the local vernacular. Internal links enhance findability of related information and external links ensure web-wide reach of content.

Information is organised in three broad categories of history, culture and environment. Following Mosimege (2005), the model allows use of folksonomies within these three broad categories. Contributors are free to use traditional names for concepts peculiar to the community to create sub-categories and article names. The advantage of folksonomies, in contrast to a controlled vocabulary, is that it is open-ended and can respond quickly to changes in the way users categorize content (Hartman, 2006). It thus promotes the forming of a social network among web users.

The Library

Existing public library infrastructure is used as a platform from which the programme is launched, constituting a significant cost-saving factor. The program is run from a central programme office in the Systems Department of the library, equipped to facilitate training and content management. Whereas the central office is responsible for directing and co-ordinating the project, branch libraries form the link to the communities and are responsible for outreach programmes and co-ordinating of data collection within each community.

Introducing the programme to the community

The programme is introduced to community leaders by the librarians at branch libraries. Formal agreements to run the programme in an area are obtained from traditional and political leaders to ensure collaboration from communities. Presentations are done as widely as possible to raise awareness among communities and promotional material distributed at community centres such as libraries, health clinics and customer care centres. Outreach programmes are periodically run from libraries.

Supporting data collection

Fieldworkers are based at branch libraries from where they go out to collect data. The branch library supports fieldworkers in providing space for oral history interviews, providing internet access and assisting with audiovisual equipment where necessary. Further support of the programme is rendered through local outreach activities in which the programme is promoted in workshops and meetings at which knowledge is shared and recorded. Promotional material is also distributed from branch libraries.

Partnerships with other institutions are pursued, such as museums and archives. Often their collections can be enriched by tangible donations of artefacts or documents from community members relating to their oral histories that they offer to hand over for preservation. Communication and collaboration between experts and ordinary people are promoted by the interaction between librarians, fieldworkers and community members, sharing knowledge and ICT expertise.

Managing the data

Preliminary data management is done by branch librarians to upload and edit data where necessary. Further collection management is done at the central programme office with assistance from the cataloguing and reference departments of the library in editing and organizing of the data (indexing, hyper-linking, creating folksonomies, etc. to ensure effective retrieval). Because the social software allows input in any language, translation of data needs to be done selectively. Information posted to the website is archived by the hosting company. Extended information is stored externally and made available on request. To ensure adherence to selection policies and intellectual property rights, the content managers review new input on an ongoing basis.

Collection development by the librarians is done as part of their professional duties to ensure all aspects of the community knowledge is covered. Shortfalls are addressed through regular library outreach activities such as holiday programmes, storytelling forums, historical society initiatives, cultural events, craft workshops and exhibitions, for which there are well developed methodologies and capacity in the library environment.

Reviewing the programme

Reviewing the programme regularly is the responsibility of the central programme office. The success of the programme is quantified through the following key indicators:

- number of database entries in the various knowledge categories
- number of pictorial material and video streams
- number of times the site is visited
- number of people registering on the site to add information
- amount of information collected from communities
- amount of information collected from established resources, i.e. local cultural and natural history museums, the botanic gardens and indigenous nurseries, and other local institutions
- number of people contributing to the website
- number of people involved in collecting of information
- number of people trained to moderate content
- number of community workers trained to collect and capture stories and information

- number of community members trained to capture information
- community surveys and opinion polls

The Community

Metropolitan areas in Africa are typically surrounded by peri-urban and rural areas, with large populations where there is little coherence in social structures, partly due to the dispersed nature of living environments and partly due to the poor economic situation prevalent in these areas. It has been shown over the past few decades that top-down social development strategies do not achieve sustained public participation (Korten, 1983; 1990). The model on which this programme is based favours the micro-level approach (Davids, Theron & Maphunya, 2005), adopting a bottom-up philosophy, with the community as the most important member in this partnership (Coetzee, 2001). Local leaders, programme fieldworkers and the community members themselves are the main participants.

Community leaders

Leaders from the community play a pivotal role in the establishment and continuation of the programme. Protracted engagement of local leaders in discussions around indigenous knowledge issues ensures alignment of targets to current sentiments, which is imperative to sustained community interest in the programme. Before any work is done in an area meetings are arranged with local leaders to present a draft proposal, obtain their input and finalise agreement on the terms and conditions under which the project will be run. Once the agreement is in place the programme is launched.

Fieldworkers

Volunteer fieldworkers are selected from the immediate community to drive the programme at ground level, with the support of branch librarians. They have intimate knowledge of the community and are in a position to build up trust relationships with members of the community.

Once trained in ICT skills and oral history protocols, they are sent out into the communities to collect information (Denis & Ntsimane, 2008; Ritchie, 2003; Thompson, 2000). A structured work plan is used as a guideline to ensure continuity, with small incentives to encourage workers to adhere to the plan where possible. They are expected to do data-collection using various methodologies:

- Short journalistic style reports of current community activities, historic places, events, and information on traditions, arts, crafts, religion the living environment, etc.
- Oral histories and stories. The programme and its aims and objectives are introduced at a pre-interview, outlining the scope of the information that will be recorded to ensure usability of the end result. An appointment is arranged for the interactive interview and carried out by the fieldworker with library staff assisting where necessary. At the post production stage summary transcripts and images are posted to the website or e-mailed to the content management team for editing and posting. Audio and video recordings and digital images are downloaded for external archiving.
- Research on high-interest themes and recording of the information.
- Posting of articles and images to the website.
- Informal social networking among the community to create awareness.

- Assisting community members to post their own information to the website. This way digital skills transfer is achieved widely throughout the community.

Community members

The community in all its complexity constitutes the natural resource that forms the basis of the model. Ownership of the knowledge rests with the community and sustainability of the programme is ensured through community participation. Special target groups in the community include the elderly, the youth, cultural groups including artists and crafters, professionals and technologists.

Fieldworkers approach people in the community with valuable or otherwise interesting knowledge, explaining that the information will be published on the web in the interest of sharing the knowledge with other Internet users. People submit information for publication on the web on a voluntary basis, and from a personal perspective, i.e. they decide what information they want to part with and interpret the facts of an event from own experience. Oral histories in particular are highly contextual (Grele, 1991). Contributors sign an agreement to release the information for educational purposes only, including publications, exhibitions, presentations and the web, without relinquishing copyright or performance rights. Full acknowledgement of the owner of the knowledge is published with articles.

Through public donor funding more and more schools around the metropolitan perimeter have Internet access, which opens up the potential for the youth to participate in the programme by posting information directly to the website. This opportunity is exploited through collaboration with local schools. They are invited to join the programme by adding relevant local information to the website to complement curriculum material. This creates potential for secondary educational opportunities in the form of digital assignments through which learners not only gain local indigenous knowledge but also improve their digital skills, while at the same time making a contribution to the preservation of their cultural heritage.

Professionals and technologists within the community are encouraged to share factual knowledge with other community members. Members from formal community structures, commerce and local government departments (e.g. health, agriculture, education, environmental affairs, culture and heritage) with local information that belongs in the public domain are encouraged to make the information available for posting to the website.

Implementation

Challenges

From the institutional side, the largest hurdles are funding and staffing. The pilot project could only be launched once capital funding for web design, ICT and audiovisual equipment was secured. The libraries are not well equipped with ICT's; in many instances a single PC with Internet access has to be shared among all members of the public. Posting of data and images to the website is compounded by the bandwidth problem that is still plaguing large parts of Africa. No additional staffing was made available and time has to be set aside from regular duties, which means the project is not taking priority in service delivery to the public.

From the community side the main challenges are low skills levels, large distances, lack of Internet access and poor communication. The very low skills levels of fieldworkers slow

down the roll-out of the programme. Intensive training with repetitive follow-up workshops places excessive stress upon library staff time.

Rural communities live widely dispersed in remote areas with extreme topography. Libraries are often very far away from where they live and poor road infrastructure makes access difficult. Transport from far outlying communities is costly and there is very limited funding for stipends for fieldworkers who mostly come from the unemployed sector. To alleviate the situation four shipping containers have been refurbished to serve as small community libraries in the most under-serviced areas.

There is a ubiquitous lack of Internet infrastructure within local communities and at schools. There are no Internet café's and in the few schools that have Internet it is often dysfunctional. They are currently being fitted with wireless connectivity for Internet.

Communication with fieldworkers and potential interviewees are problematic in remote rural areas where mobile phone coverage is poor or altogether lacking. They also don't have access to email which is less expensive than phoning.

From the technical side, a lack of web expertise forces the library to employ media consultants for the design, set-up and administration of the website. Library staff are being trained in basic web administration and content management but the learning curve is steep.

Results

The pilot project is now nine months old and real results are still modest and slow in coming in. Preliminary achievements focus mostly on the building of infrastructure for the programme.

These include design, set-up and registration of the website as well as design and set-up of the MediaWiki database with relevant knowledge categories. The programme has thus far been introduced to eight communities in the greater Durban area.

Information brochures and training manuals have been developed. Training workshops have been held in which fieldworkers and librarians were trained in PC skills, basic wiki administration, oral history interviewing and recording and photography skills.

Video and audio recordings of oral histories have been done and a basic collection of previously researched and documented information captured.

Analysis of the website activity suggests wide international interest in the site (Fig. 2). Continuous growth in the number of visitors has been recorded since the launch of the site. During February 2009 there were 873 visits to the www.ulwazi.org site from 41 countries; in March this figure has risen to 1096, with the most popular content the pages on indigenous games. It is also noted that there is a preference to articles in Zulu, the local vernacular.

Lessons learnt

Expect a high turnover of fieldworkers. Since they come mostly from the unemployed sector of the community they leave the programme as soon as an employment opportunity arises, placing additional stress on the recruitment and training aspects of the project.

Incentives, however small, goes a long way to sustain interest in the programme among fieldworkers and community members alike. ID cards with contact details of the fieldworkers give them a sense of ownership and pride in the programme as does posting their details on the Contacts page of the website. Certificates for training courses attended are essential and of particular value in the case of nationally accredited courses. Covering of transport costs and are always appreciated.

With a multilingual memory database it is necessary to do selective translation, albeit on a limited scale. Content managers need to have a good grasp of the languages being used.

As with many development projects, the programme is labour intensive. Results are slow to come in. Content management is time consuming and need a relatively high degree of skill and experience. Development of ICT skills among community members come in very small measures and are seemingly isolated within large communities.

Local community leaders are on the whole very positive and have very little reservation in supporting the programme. They are particularly happy about the capacity building with regard to ICT skills, and are supportive of the access to indigenous knowledge in schools. The only concern raised ubiquitously is the acknowledgment of local leadership in the process.

Training is a slow process. Don't assume that having a single big training session will cover basic training. Especially with fieldworkers training of small groups and one-on-one training is more effective, but time-consuming.

Communication with fieldworkers is problematic. Don't rely on regular communication from them. We have found that they are not always in a position to communicate and constant follow-up communication from the library is necessary.

Marketing and advocacy is time-consuming. The best way to promote the programme is through presentations to small groups and one-on-one discourse with potential stakeholders. Constant follow-up is necessary to ensure that enthusiasm and support among stakeholders are kept up. The follow-up is best done at branch level targeting small groups through community outreach activities at branch libraries.

Ordinary people in the community are very keen to share their history and knowledge. The programme gives them a voice, bearing testimony to the need of ordinary people to be heard, to feel their contribution is meaningful; this way they become part of a bigger information society. However, care needs to be taken not to raise false expectations and not to make promises that cannot be kept, lest the credibility of the programme be compromised.

Recommendations

The programme should be structured as simply as possible at community level, without losing sight of the overall goal. Complicated, unfamiliar structures tend to inhibit trust relationships and slow down progress. It is also advisable to stagger work areas time wise and to have regular review meetings with all stakeholders in order to keep proper control. Technical expertise is non-negotiable; if it is not readily available internally it should be outsourced, in which case the programme leader has to be closely involved at all stages to ensure the required results are achieved.

Benefits and potential impact

The programme creates digital content for a library of local indigenous knowledge. By running the programme from a public library platform, it is incorporated in a long term strategy that forms part of the Digital Collection Development function of the library. Short-term benefits to the community include:

- Digital content with relevance to local communities becomes available on the Internet.
- Collaboration within a wide audience promotes social networking.
- Free Internet access to poor/low-income communities enables access to global information.
- Usage of digital resources is popularised among local communities.
- ICT skills are transferred to local communities.
- Local communities re-connect with their cultural heritage.
- African public libraries gain a foothold in the international information society of the 21st century.

Through this programme disadvantaged communities gain online access to their indigenous knowledge. This constitutes participation in the global information society, with the potential of narrowing the digital divide.

Economic empowerment of communities through skills development and knowledge provision carry the potential of job creation and progress in poverty alleviation. This will enhance self-esteem and self-confidence, impacting on social development and democratization.

Knowledge provision will enable behaviour changes and informed decision making, as well promote the creation of new knowledge within the community. It will stimulate innovative thinking, aid learning and promote indigenous technologies. Formal and informal knowledge levels in the community will be enhanced, leading to an informed society.

Collaboration and knowledge sharing not only contribute to the preservation of culture but also bring about cross-cultural understanding and tolerance and improve social cohesion in the community.

Conclusion

The programme enables communities to preserve and manage their own indigenous knowledge in an environment that is sustained through local government structures. In providing an online, contextually-based information service to local communities, public libraries in Africa will ensure future-oriented access to cultural heritage resources through 21st century information communication technologies (ICTs). They will be instrumental in creating a future for the people of Africa by preserving the richness of the past and linking them to the cultural heritage on which their identity is founded.

Through the programme an opportunity is also created for the Public Library as an institution to re-affirm its relevance in an era of technological advancements that threatens to render them redundant. 21st Century technologies are used to the advantage of the library to overcome the many practical, often insurmountable obstacles of maintaining traditional style public libraries in remote rural areas.

References

- Armstrong, P. 2008. Library and Archives Canada: towards a trusted digital repository. *Proceedings of the 74th International Federation of Library Associations Conference, Quebec City, 10-14 August, 2008.*
- Chisenga, J. 2008. The e-Agriculture Initiative: Achieving the MDGs through sharing of Innovative Experiences. *Proceedings of the 18th Standing Conference of Eastern, Central & Southern African Library & Information Associations, Lusaka, 15-19 July 2008.*
- Coetzee, J.K. 2001. A micro foundation for development thinking. In: Coetzee, J.K. Graaff, J., Hendriks, F & Wood, G. *Development theory, policy and practice.* Cape Town: Oxford University Press.
- Dauids, I. Theron, F. & Maphunye, K. 2005. *Participatory Development in South Africa: a development management perspective.* Pretoria: Van Schaik.
- Denis, P. and Ntsimane, R. (Eds) 2008. *Oral history in a wounded country: interactive interviewing in South Africa.* Pietermaritzburg: University of KwaZulu-Natal Press.
- Du Bruyn, D. 2003. *Oral history: the key to unlocking our community history.* Available at http://www.fs.gov.za/Departments/SAC/Library/oral_history_main%20article_oct-dec%202003.htm (Accessed on 23 March 2009).
- Farkas, M. 2007. Wikis: Basics, Tools and Strategies. *Presentation at the 22nd Annual Computers in Libraries Conference, Arlington, 16-18 April 2007.* Available at <http://meredith.wolfwater.com/wordpress/> (Accessed on 18 April 2007).
- Grand, B. 2006. Encouraging interaction online: the emerging role of Blogs/Wikis/RSS in fostering and encouraging user participation. *Presentation made at the Libraries & Information Management Africa 2006 Conference, Johannesburg, 25-27 October 2006.*
- Grele, R. 1991. *Envelopes of Sound: the Art of Oral History.* 2nd ed. New York: Praeger.
- Hartman, K. 2006. Knowledge management using Weblogs, Wikis and RSS. *Proceedings of the 17th Standing Conference of Eastern, Central & Southern African Library & Information Associations, Dar es Salaam, 10-14 July 2006.*
- Hedelund, L. 2006. Community Center Gellerup: from everyday practice to method development: a Danish Public Library case. *Proceedings of the 17th Standing Conference of Eastern, Central & Southern African Library & Information Associations, Dar es Salaam, 10-14 July 2006.*
- Internet World Stats 2008. *Internet World Stats: Usage and Population Statistics.* Available at <http://www.internetworldstats.com/stats1.htm> (Accessed on 3 November 2008).
- Iseke-Barnes, J & Danard, D. 2007. Indigenous Knowledges and Worldview: representations and the Internet. In: Dyson, L.E., Hendriks, M. & Grant, S. eds. *Information Technology and Indigenous People.* London: Information Science Publishing.
- Knight, S. 2008. National Digital Heritage Archive: securing the future. *Proceedings of the 74th International Federation of Library Associations Conference, Quebec City, 10-14 August, 2008.*
- Korten, D.C. 1983. Social development: putting people first. In Korten, D.C. & Alfonso F.B. (Eds.) *Bureaucracy and the poor: closing the gap.* West Hartford: Kumarian Press.
- Korten, D.C. 1990. *Getting to the 21st century: voluntary action and the global agenda.* West Hartford: Kumarian Press.
- Lee, D. & Crichton, D. 2008. Best Practices in Library services for Aboriginal Peoples in Saskatchewan. *Proceedings of the 74th International Federation of Library Associations Conference, Quebec City, 10-14 August, 2008.*
- Lwoga, E.T. & Ngulube, P. 2008. Managing indigenous and exogenous knowledge through information and communication technologies for agricultural development and achievement of the UN Millennium Development Goals in Tanzania. *Proceedings of the 18th Standing Conference of Eastern, Central & Southern African Library & Information Associations, Lusaka, 15-19 July 2008.*
- Lwoga, E.T. & Sife, A. S. 2006. From collections management to knowledge management practices: considerations for the Sokoine National Agricultural Library in Tanzania. *Proceedings of the 17th Standing Conference of Eastern, Central & Southern African Library & Information Associations, Dar es Salaam, 10-14 July 2006.*
- Mosimege, M. 2005. Indigenous knowledge systems policy in South Africa: development of digital libraries and implications for benefit sharing and intellectual property. *Presentation made at the Commons-Sense Conference, Johannesburg, 27 May 2005.* Available at: <http://www.common-sense.org/presentation/mosimege/Mosimege.pdf> (Accessed on 2 June 2007)
- New York Public Library. Schomburg Center for Research in Black Culture. Available at <http://www.nypl.org/databases/schdb.cfm> (Accessed on 22 April 2007).
- Ngulube, P. 2004. Strategies for managing and preserving indigenous knowledge in the knowledge management era. *Proceedings of the 15th Standing Conference of Eastern, Central & Southern African Library & Information Associations, Johannesburg, 15-19 April 2004.*

- Nyumba, J.B. 2006. The role of the library in promoting the application of Indigenous Knowledge (IK) in development projects. *Proceedings of the 72nd International Federation of Library Associations Conference, Seoul, 20-24 August 2006*.
- Okello-Obura, C. & Minishi-Majanja, M.K. 2008. ICTs utilisation among SMEs to eradicate poverty in Uganda: the way to go. *Proceedings of the 18th Standing Conference of Eastern, Central & Southern African Library & Information Associations, Lusaka, 15-19 July 2008*.
- Ritchie, D. A. 2003. *Doing Oral History: a practical guide*. 2nd ed. New York: Oxford University Press.
- Rowley, J. 2003. Knowledge management – the new librarianship? From custodians of history to gatekeepers to the future. *Library Management*, **24** (8/9), 443-440. Available at <http://www.emeraldinsight.com/ft/> (Accessed on 7 September 2005).
- Sithole, J. 2006. The challenges faced by African Libraries and Information Centres in documenting and preserving indigenous knowledge. *Proceedings of the 72nd International Federation of Library Associations Conference, Seoul, 20-24 August 2006*.
- Smithsonian Institution. Center for Folklife and Cultural Heritage. Available at <http://www.folklife.si.edu/index.html> (Accessed on 23 April 2007).
- Snyman, M.M.M. & Van Rooi, H. 2006. Facilitating knowledge management: opportunities for librarians in a changing world. *Proceedings of the 17th Standing Conference of Eastern, Central & Southern African Library & Information Associations, Dar es Salaam, 10-14 July 2006*.
- Thompson, P. 2000. *The Voice of the Past: Oral History*. 3rd ed. New York: Oxford University Press.
- United Nations. 1990. The African Charter for Popular Participation in Development and Transformation. *Proceedings of the International Conference on Popular Participation in the Recovery and Development Process in Africa, Arusha, 12-16 February 1990*. Available at <http://www.africaaction.org/african-initiatives/chartall.htm> (Accessed on 3 June 2007)
- United Nations. 1995. World Summit for Social Development – a New Agenda for Social development. In: *Participatory Development in South Africa: a Development Management Perspective*. Pretoria: van Schaik.
- United Nations. 2000. United Nations Millennium Development Goals. Available at <http://ddp-ext.worldbank.org/ext/GMIS/home.do?siteId=2> (Accessed on 1 June 2007).
- Wiki. 2007. In *Wikipedia, the Free Encyclopedia*. Available at <http://en.wikipedia.org/wiki/Wiki>. (Accessed on 18 May 2007).
- World Bank, 1998. *World Development Report*. Washington, D.C.: World Bank.
- WSIS, 2003. *The Geneva Declaration of Principles and plan of Action*. Geneva: WSIS executive Secretariat.
- WSIS, 2005. Tunis Agenda for the Information Society. WSIS-05/TUNIS/DOC/6/ (rev.1). Available at http://portal.unesco.org/ci/en/files/20687/11327453881tunis_agenda_En.doc/tunis_agenda_en.doc (Accessed on 21 September 2006).