Leveraging Public Libraries and Information and Communication Technologies (ICTs) to deliver information services for development in Botswana: Towards the Information Society

(Prepared in October, 2010)

By

Kgomotso H. Moahi

University of Botswana

Gaborone

Botswana

1. Introduction

It has been a number of years since the World Summit of The Information Society (WSIS) plan of action was agreed upon. This plan essentially focused on the reduction, if not elimination, of the digital divide and the development of the information society. An information society can be defined in many ways, but simply put, it is a society in which the creation, manipulation, storage, diffusion and use of information is pervasive and is facilitated by the use of information communication technology (ICT). Elsewhere, the information society is defined "as an initiative that most countries are now approaching to provide support for human development through the use of ICTs, generating opportunities for development in learning, health, economy, government, and other related services" (eMexico, 2010). The information society is a necessary precursor to the knowledge economy where through access and manipulation of information, knowledge is generated and is exploited. ICT diffusion is a precondition for the development of the information society, however, there has to be attention and focus on the relevance of the information that is facilitated through the utilization of ICTs. It has become clear that this information or even knowledge society seems to be the premise only of developed countries. Within the midst of plenty, there are identifiable populations

1

in developing countries who are excluded from a wide range of information and knowledge. To be effective participants in the global economy and society, means must be found to provide this access to information and knowledge to the populations in developing countries. According to the Global IT Report of 2008/9 (Soumitra & Mia, 2009), ICT can and has empowered people with access to information and knowledge. It can have an impact in facilitating education, access to markets and business, as well as social interactions (2009:5). It is further stated that in developing countries, ICT can reduce poverty by increasing productivity and therefore economic growth. Such statements tend to make assumptions that all that is required for information to flow are ICT tools and everything else will follow. The assumption is also that the required content is or will be available as soon as computers and access to the Internet is made possible, but nothing could be further from the truth. Any technology is judged and assimilated on the basis of its perceived and actual benefit or advantage. It is therefore possible that a country could go as far as possible to ensure that the ICT infrastructure is available, and still have a situation where the facilities are largely unused. The reason largely being that, the very same facilities do not add value in terms of providing content that would be of interest and relevance to rural communities. I contend in this paper that there is need for content and infrastructure to be developed at the same time in order for ICT to become a catalyst in reducing poverty and fostering economic development.

This paper seeks to problematize the belief that technology can be a panacea that simply by its presence can lead to development. As one reads literature, one comes across many writers who seem to believe that all developing countries need to do is to ensure that the information and communications infrastructure is in place, and then the information and knowledge will simply follow. This paper will outline the initiatives the Government of Botswana has put in place with the aim to provide information access to even the most underserved. The premise of the paper though, will be that in as much as there are many initiatives in place, there are still pockets of the population who do not get the information that they require in order to become a meaningful part of development in the country. Botswana has committed itself to having an information

2

society in Botswana through its Vision 2016 blueprint. However, the emphasis would seem to be focused on infrastructure and e-government. Whilst ensuring that people have access to government programs and services online is in itself a good thing, there is a lot more that needs to be done to ensure that the technology that is put in place, is seen to be useful and relevant to communities. The argument therefore is that there is need for effective partnership between libraries, communities and other institutions in order that communities or the public can have access to timely, relevant information. The role of public librarians is paramount in ensuring the required collaboration takes off and yields results.

2. Developing the Information Society in Botswana

Calls for the creation of information societies in Africa go back as early as 1998 when the African Information Society Initiative (AISI) talked about developing information societies in most African countries by 2010. As well Vision 2016 - The blue print for development in Botswana, envisions an informed, educated nation by 2016, where every citizen should have access to quality information, enabled by the use of ICT. Botswana also participated in WSIS which clearly showed a link between ICT and development. WSIS stood for the development of "people centered, inclusive and development oriented information society, where everyone can create, access, utilize and share information and knowledge". Put another way, WSIS advocated the bridging of the digital divide. The definition of the digital divide goes beyond lack of access to technology and the idea that providing the technology will decrease the divide. The problem as I see it is in the narrow definition of the digital divide to mean lack of access to technology and the internet. In order to create the information society, there is need to address the multifaceted nature of the digital divide. There is need to critically consider what really encompasses the digital divide. The lack of access to technology is one aspect, but there is also the aspect of capacity (skills) and content (utility). Underlying the divide are issues of geography, poverty, education, economic status, age, gender, as well as race. The divide can therefore be bridged by the following;

ensuring access to the technology; building capacity for using the technology; ensuring that there is relevant and useful content for communities; ensuring that the content is in the language that people can use and can understand; mainstreaming technology and ensuring that it is thoroughly exploited to serve public interest. It is therefore possible at this stage to state that the divide is a direct result of inadequate infrastructure, cost of access to the technology, lack of policy that enables initiatives for access; lack of local content, as well as language, education and literacy barriers.

The Government of Botswana has made laudable headway in a number of areas, as I shall show below, but not very much in the area of local content. Writing in 2004, Mutula outlined the challenges faced by the Government of Botswana to make the country an information society. These included the lack of liberalization of telecommunications, lack of an ICT policy, lack of universal access policy, etc. Six years later in 2010, Mutula et al (2010) produced a country report on making Botswana an information society which highlighted the developments that have been made to address the challenges. These included government initiatives such as the liberalization of telecommunications sector in Botswana that has resulted in the widespread use of mobile telephony, to data communications, internet services, etc. Government has also expedited rural electrification and the roll out of telephone services popularly known as *Nteletsa*. There have been two phases on *Nteletsa*; *Nteletsa* I which covered the Southern, Kweneng and North East Districts in Botswana; *Nteletsa* II is currently underway and is aimed at "connecting 197 villages by April 2011 with basic voice services, data, internet and desktop services and through *Kitsong* Centers" (Pheko, 2010:7). Further, the Government of Botswana, in line with other countries that participated in the World Information Society meetings and activities has set itself the goal of facilitating the development of the country into an information society. This it has done through the development of policies, such as the National ICT policy, known as *Maitlamo*, and the Universal Access and Services Policy. The overarching aim in developing such blueprints is to provide increased access to quality and affordable ICT and communications services. The *Maitlamo* Policy was drafted in 2004, and

4

implementation of the ideas and projects contained in it has already begun through the Ministry of Infrastructure and Communications. Specifically Maitlamo set out to provide the requisite national ICT infrastructure that would enable a number of projects such as schools connectivity, community connectivity, e-health, e-government, etc. The Universal Access and Services Policy project was mooted in April 2006 aims to provide a framework for providing universal services to all communities in Botswana; a Universal Service fund has been established to help fund rural connectivity. The policy covers all sectors that include telecommunications, Internet related services, postal, broadcast and print media. Another project in the offing is the Government Data Network III project which is aimed at upgrading the government data network to improve security, provide faster connection and reduce cost for government. Government also aims at increasing the number of broadband subscribers to 5,000 by the end of June 2009. In order to increase access to quality ICT services, the government intends to connect 235 schools as well as provide access to communities through 50 *Kitsong* (community information) centers by December 2009. Government is alive to the fact that the population must have easy access to government programs and information, to this end therefore, a portal is being developed through a project that is currently focused on developing the relevant content. At this stage, the aim is to provide 4 services online which include customs and excise, the ASYCUDA system, the Government Gazette online and presentation of primary and secondary school result online.

3. Other requirements for an information society

Clearly, The Government of Botswana has put in place initiatives required to move the country to become an information society – but mainly in terms of creating a favorable regulatory and policy framework, developing infrastructure, and moving towards e-government services. The achievements that have been made are impressive; the teledensity as at 2010 is expanding due to the growth of the mobile cellular service. The system is fully digital, with fiber optic cables linking the main population centers in the eastern part of the country. Government is also looking to improve connectivity and

broadband through participation in projects such as the East African Sub-Marine Cable System (EASSy), and the West African Cable System (WACs). Other systems such as the West African Festoon System (WAFTS), the West African Cable System (WACS) and SEACOM have shown interest in the Botswana Market (Pheko, 2010). Cell phone density is currently 80 telephones per 100 people; fixed line density though has declined and stands at 9 per 100 persons (Indexmundi, 2010). However, providing infrastructure and access to ICT is only part of the story, there are other factors that must be considered such as capacity and skills to use ICT and clarity on the information needs to be targeted through implementation of ICTs. Pheko (2010) noted that low computer literacy and lack of local content make it difficult for Internet penetration to grow in Botswana.

3.1 Capacity and Skills

Much of the literature on ICT and public libraries laments the lack of skills, and as early as 1999 Lim quoted in Ashcroft and Watts, (2009) suggested too much emphasis has been on development of ICT infrastructure without due recognition of the need to do something or to address human resource development in this regard. In order for ICTs to be used, users must possess the requisite skills capacity and knowledge. Participation in the information society requires that communities do posses the skills. Clearly, this goes beyond the provision of the pipes and equipment, but goes to the heart of empowered communities. It could be said that the biggest barrier for most people lies in learning about the potential of ICT than its access. But much more significant is the lack of ICT skills on the part of library staff that are expected to be the vanguard of imparting skills to communities. Indeed, we learn that the librarian of the 21st Century is becoming more and more important as technology makes inroads into the information field; just like the Web 2.0, we have the library 2.0. Not only does such a librarian use the latest technologies, but they also serve as educator, training users on technology and ensuring that relevant content is availed anywhere, anytime to its user. Ramos (2007) states that the principles governing Library 2.0 is that the library is

everywhere, it has no barriers, it invites participation, and uses flexible, best-of-breed systems such as wikis, blogs, social networking sites, voice over internet telephony (VOIP), Second life, etc (Gilbert, 2008). To many of us in this part of the world, this may sound utopian, but it is actually happening in other countries, notably the "developed countries". However, for various reasons, librarians in the "developing" countries are trailing far behind.

A survey of 22 public libraries in 10 English speaking African countries reported to have found disparities in the level of access and use of ICTs by the libraries (Chisenga, 2004). Although most of the countries included in the survey had internet connectivity, none of them were providing web-based library services, meaning that facilities were not used to directly benefit the user communities. The study also noted a significant absence of ICT skills in general on the part of public librarians. This is mainly because highly qualified IT experts can earn more money in private firms than working in public libraries. Some libraries were found to be dependent on other institutions for IT expertise, for example, BNLS depended largely on the services of the Government Computer Bureau (which served the rest of the government ministries and departments). A study conducted for the African Comprehensive HIV/AIDS Partnership (ACHAP), by a team of researchers from the Department of Library and Information Studies (DLIS), at the University of Botswana (UB), found the ICT skills of personnel in public, community and village reading rooms (VRRs) to be almost nonexistent. Whilst some libraries might have computers, there was no connectivity and the applications used on the computers were the more basic ones. Most of the librarians rated their level of expertise on a spectrum of nonexistent to average. Besides the lack of skills amongst librarians themselves which was highlighted by the UB-DLIS study, there is an issue of capacity for communities. The study found that there were disparities in computer skills and knowledge between rural and urban sectors, and that in the main, computer skills was limited if not non-existent in the rural areas. It is a requirement that librarians themselves be conversant with the technology so that they can be in a position to develop the skills of using ICT amongst communities so.

3.2 Information Needs of Communities in Botswana

In order to make an assessment of community e-readiness during the development of the national ICT policy in 2004, the *Maitlamo* consultants established the information requirements of communities in Botswana. The study covered 20 communities distributed across Botswana. Whilst communities lamented the scarcity of information services, they did articulate their areas of information need. Communities were specifically asked what their information needs were. Their responses covered a broad range of needs that included government services; government information; information for livelihood (agricultural and business); jobs related information; health and education. To a large extent, communities were concerned about obtaining information that would enable them to be able to feed and take care of themselves and their families. Since many of them were engaged in livestock and cattle rearing and other agricultural endeavors, they felt that they needed information about markets to buy and sell their produce. Specifically information required included: pest control, agricultural government related policies, *Matimela* (stray cattle) database, artificial insemination, livestock diseases and medication, database of government water wells, and information about cattle that were on sale. Business related information – such as business funding, small business management and marketing and taxation was also mentioned as an area of need. Communities felt that there was a need to have local community information services that would inform people about business and market related information within the community itself.

There was also concern about local access to government information and services thus obviating the need to travel long distances to major servicing centers. There was a strong feeling that many communities were cut off and far removed from services and information that many other communities (especially in the eastern part of the country) take for granted. A number of communities actually felt they were not really in Botswana and referred to Gaborone and surrounding areas as being Botswana implying that they

were not part of the country. Educational opportunities were another area where communities felt they needed information, especially that they had young people who had no jobs and needed to be afforded the opportunity to further their education. There was reference to the fact that the schools broadcasting service on the national radio does not reach many communities and yet it is a necessity in assisting rural teachers. Other kinds of educational information required included information on vocational education, computer training, information on the admission requirements of the country's educational institutions, and access to admission forms. Similarly, the UB-DLIS Study funded by ACHAP of 2008 identified the types of information that communities would like to have provided which included current affairs, education, health, business, and agricultural information. Communities were also asked what they would like to see delivered through online means. The information identified included information on health, agriculture, SMME development and funding, Entrepreneurial/business finance/funding, education, environmental information, etc. Their information needs tallied with those identified in the earlier *Maitlamo* study of 2004. Further, writers such Mchombu (1993) have identified the information needs of communities and these resonate very much with the needs as articulated by the communities during *Maitlamo* policy development as well as those by the UB-DLIS study.

4. Opportunities and Prospects: the Role of the Library

In the early days of the internet, there was a lot of speculation as to whether ICTs and the Internet would eventually replace the library as we know it. Subsequent to that, research, especially in places where the Internet is pervasive and access is not an issue, found that instead, the Internet has complimented library services. At least in the West, libraries needed to focus more on training, education and guidelines of ICT use for everyone, and deemphasize their role as a lending library and provider of local community programming (Aabo, 2005). Public libraries in Botswana have emphasized their lending services and less the provision of local community information.

Communities have indicated that the greatest barrier they faced in obtaining relevant information in Botswana is the unavailability of the right kind of information (UB-DLIS, 2008).

In general, the role of the public library is to provide access to information and knowledge for various purposes, such as education and recreation to name but just two. In the developing world, where literacy levels are low, the role of the public library is also to repackage relevant information for effective use by communities that they serve. Public libraries are basically meant to provide access to information (that is relevant) to communities regardless of their age, race, education, and socio economic status. Kierslake and Kinnel (1997) quoted in Aabo (2005), state that the public library should impact on society in 3 ways: they should have direct impact on communities that they serve, for example, providing information that is relevant to their lives and circumstances and they should "foster cultural enrichment and diversity". Libraries should also have an impact on skills, such as literacy, lifelong learning, and a reading culture. The last impact is an economic impact – libraries can be an integral part of extending social inclusiveness and participation (Aabo, 2005). The UNESCO Public Library Manifesto declares that public libraries should be local gateways of knowledge, providing basic condition for lifelong learning, independent decision-making, and cultural development of the individual and social groups. Public libraries can serve as democratization institutions that enable and empower communities for participation in the economic, social, and political spheres in any nation. Libraries should and do have a major role in bridging the digital divide in ensuring access, capacity and content.

In the initiatives outlined in this paper, no mention of the role of the library services as partner in providing local content is made at all. Thus, one sees that the government is placing *Kitsong* centers in post offices but not considering doing the same in libraries where people are free to come and go. Perhaps the reason for this could be that libraries have not projected themselves as a vehicle of development information and

local content and therefore have themselves to blame for being by-passed in spite of WSIS calling for collaboration with libraries on this score.

Greyling and Zulu (2009) state that "African Libraries are poorly equipped to make a meaningful contribution to the current global digital knowledge economy. This is attributed to low local content on the internet which is said to retard buy-in from local communities into digital resources and inhibits development of digital skills". Pena-Lopez (2009) has indicated that the "lack of utility of ICT" is the major barrier to the adoption of ICT. It is a barrier in that even as technology can be availed to communities, it might not be very useful if people do not find information that is useful and that speaks to their context at that particular time. Indeed he states that the lack of utility can be explained in two ways "a **real lack of utility** mainly due to lack of digital content and services that fit one's purposes, be they personal or professional, for leisure, for activism, for work, for training and education, etc; the second is **a perceived lack of utility** mainly due to lack of e-awareness and not knowing the benefits that ICTs can bring to one's life. This lack of e-awareness, of course can be accompanied by the lack of several digital skills which create a vicious circle – less digital skills, less e-awareness, and so on" Pena-Lopez, 2009:2).

However in Botswana, it is promising that the Bill and Melinda Gates Foundation is currently funding a project to provide computers and access to the Internet through public libraries. One though would like to caution that this should not be seen as competition to the *Kitsong* centers, but rather complementary to them. The Sesigo project is an initiative funded by the Bill and Melinda Gates Foundation aimed at providing computers and the Internet in public libraries around the country. Thus the project addresses the second aspect of lack of utility – perceived lack of utility due to lack of e-awareness. The project is overseen by ACHAP together with the recipient department being the Botswana National Library Services (BNLS). The project, as stated provides Internet access as well as free training on the Internet (to both staff and the community), started in 2008 and will conclude in 2012 when it will be handed over to BNLS. It is expected that at the end of the project, all the branch libraries and village

reading rooms (VRRs) will be connected to the Internet, thus providing a free service to communities. The aim of the project as stated by Maswabi (Daily News, 2009), is to "transform the lives of people in terms of economic and social benefits... the project is aimed at developing Batswana by way of computer and Internet skills provision offered free of charge".

What then remains to be done is to provide the second form of utility which is the lack of digital content. Clearly, a lot is being done in Botswana to provide the hardware and connectivity; however, there is a challenge to ensure that content is also available to avoid creating white elephants out of the equipment. It has become increasingly clear that most African governments do not have deliberate policies to support and increase local content on the Internet. Policy has always provided the framework for initiatives, thus there needs to be a local content policy that spells out the need and objectives of having local content available to communities. The BNLS has to be an integral part of the machinery towards developing content in that as a public space, as well as due to the training of its staff, it is better placed to ensure that there is local content in our own libraries. Our library staff has to undergo a paradigm shift in the way that they perceive themselves and their duty within the public libraries around the country. Librarians should become collectors and packagers of information that makes a difference in the lives of communities. Such local content include information on livelihood, such as business opportunities, market prices, government empowerment programs and how to access them; practical local information, such as where to find what goods and services, who is selling livestock, seeds, and other goods; information on education opportunities, employment, health, and important these days, environment. Other examples of local content that is very critical in communities lives is indigenous knowledge systems that includes information on natural remedies, natural foods/local foods, cultural practices, technology, agriculture and the environment. The benefits of content creation cannot be overemphasized. It will facilitate acceptance and uptake of ICTs. It will enhance the participation of communities in national development and in the information society. It will make communities producers of information as opposed to

consumers. It will provide access to homegrown information and knowledge to those who are interested. Finally, it will promote community cultural heritage management. There is need therefore for a local content development policy that would be implemented by a local content task group representing all stakeholders such as government, private sector, NGOs, academic and research institutions, libraries and information centers, local communities, etc.

Greyling and Zulu (2009) present a case study on involving local communities in developing local content in an Indigenous Digital Library. Such case studies, are important because their clearly provide best practice that can be adapted to local situations. Now that Botswana has the Sesigo project, surely, it is time also to consider the development of local content, and to involve communities in doing so. There are certain structures at community level that facilitate to varying degrees, the flow of development information. These structures generate as well as facilitate the flow of information at community level. According to Serema (2002), these include Village Development Committees, Village Health Committees, Village Literacy Committees, Village Extension Teams, Parents' Teacher Associations, the K*gotla* Meetings, Governmental and Non Governmental Organizations, and Community Based Organizations, etc. These organizations are crucial in community information flow and can be tapped to ensure that information is availed to communities utilizing ICT tools at both the low and high end of the technology spectrum. There is need for librarians to partner with communities and such structures in order to identify relevant content. One of the findings of the UB-DLIS study was that library staff reported attending *Kgotla* meetings, VDC Meetings, School prize giving ceremonies, etc, as a means of identifying community information needs, they did not seem to involve these structures in the generation and collection of local content as they should. There is need for librarians to interact and engage with the community and its leaders in a more targeted manner that would result in not only identifying information needs, but collecting information for dissemination to the community at the library. There is need to move away from the

concept of a library as a reading space, but rather as a community space where communities can access information in the forms that are most user-friendly.

5. Postscript: the case for creation of the "People's Network"

Now that there are initiatives to install computers and ensure connectivity in public libraries in Botswana, the potential to create a network of the 27 public libraries, as well as the village reading rooms exists. The People's Network was an initiative of the UK Government, launched in 2002, and aimed at connecting all public libraries to the Internet, and thus ensuring that all citizens benefited from the use of ICTs. Through this initiative, users are able to get access to networked computers in libraries as well as being trained to use them. Access to the ICT has benefitted the users in that they have free access to the Internet, as well as access to the various libraries' web pages that can provide access to local and national links and information. According to Halper (2004), The People's Network has facilitated access to information on government policy and programs geared to reduce social exclusion. More people are visiting libraries since they are able to access the Internet for free and to become aware of local and national information and services. More users have been assisted to develop skills of using ICT. "Library staff are also providing services that address digital citizenship – helping citizens discover and use relevant resources. Examples are creating portals to validated information resources in areas such as health and well-being...." Halper, 2004:1). Library staff become involved in content creation in partnership with local stakeholders.

One can envision each of the 27 public libraries networked into something like the "People's Network" where location specific as well as national information and services can be made available to users and communities. As stated earlier, services and information to communities are usually provided by local government offices, Land Boards, the *Kgotla* system, Village Development Communities, Members of Parliament, and various Government Ministers as they travel around the country. It would be

14

propitious for the national/public library system in Botswana to partner and collaborate with these entities to ensure provision of information and services. Since there is a move by both Government and non Governmental Organizations (ACHAP) to provide computers and access to the Internet, it would be in order to set up systems on the WWW that provide community information and services.

Conclusion

Access to computers and connectivity at libraries would revitalize the role of public libraries in Botswana. The access, combined with relevant content, would greatly enhance the role of libraries in the publics' eyes and generate more use and more relevance of the libraries. This paper has made a case for leveraging the use of both ICTs and public librarians to propel the process of making Botswana an information society. A suggestion has been made to consider the UK People's Network as a model that could be adapted to suit the Botswana context.

References

1. Aabo Svanhild. (2005). The Role and Value of Public Libraries in the age of digital technologies. *Journal of Library and Information Science 2005: 37(4) 205-211.*

2. Ashcroft, Linda & Watts, Chris (2005). ICT Skills for Information Professionals in Developing Countries: perspectives from a study of the electronic information environment in Nigeria. *IFLA Journal 31(1), pp 6-12.*

3. Asamoah-Hassan Helena. (2004). *Sustaining African Democracies: The Library as a Key Partner.* LIASA Conference, Polokwane, Limpopo, South Africa, 27th September – 1st October 2004.

4. Chisenga, Justin (ed).2004. *The use of ICTs in African Public Libraries: a survey of 10 countries in Anglophone Africa.* INASP, 2004, Oxford, UK. http://www.insap.org/uploaded/documents/chisenga.pdf (accessed 09/12/09).

5. Department of Library and Information Studies, University of Botswana (2008). *Global Libraries Needs Assessment: A needs assessment study.* Gaborone, 2008.

6. eMexico. At: http://www.emexico.gob.mx/wb2/eMex/eMex_Que_es_la_Sociedad_de_la_Informacion. (Accessed 09/06/10).

7. Gilbert, Polly (2008). Libraries and Librarians in the 21st Century. At: http://www.slideshare.net/confirm/MjYwMDI1Mjk7bW9haGk=/356480-a67d53e4f8af21dfec7dbafa08812185bd9929c5-slideshow (Accessed 14/06/10)

8. Greyling, Elizabeth & Zulu Sipho (2009). *Content Development in an Indigenous Digital Library: a case study in Community participation.* IFLA, Milan, Italy 23-27 August 2009. pp 1- 13.

9. Halper, Sally (2004). Evaluation of the impact of the People's Network. *Update, 3 December 2004, pp 34-35.*

10. Indexmundi, 2010. At www.indexmundi.cpm/bptswana/telephone_system.html (Accessed 12/06/10).

11. Kierslake E. & Kinnel, M. (1998). Public Libraries, Public Interest and the Information Society: Theoretical Issues in the Social Impact of Public Libraries. *Journal of Librarianship and Information Science 30(3): 159-67*.

12. Lim, E. (1999). Human Resource Development for the Information Society. *Asian Libraries, 8(5), 24-29*.

13. Maswabi Tshepo (2009). In: Gaolebogwe Malebogo. (2009). *Sesigo Project ensures free Internet Access in Libraries.* Botswana Daily News, Monday November 2, 2009. Page 18

14. Mchombu Kingo. (1992). *Information needs and seeking patterns for rural people's development in Africa*. IDRC/UB, Gaborone.

15. Moahi, K.H. (2004) *Local Content and Multilingualism*. Slide presentation, WSIS Preparatory Conference, Gaborone.

16. Mutula, Stephen; Grand, Balu; Zulu, Saul; Sebina, Peter. (2010). *Towards an Information Society in Botswana: ICT4D Country Report.* Thetha Regional ICT discussion forum project. February 2010.

17. Pena-Lopez, Ismael. (2009). *Policies to increase ICT usage in developed countries.* In ICTlogy, No. 68, May 2009. Barcelona ICTlogy. Http://ictlogy.net/review/?p=2209. (Accessed 6 Jan 2010).

18. Pheko, Thari (2010). *Keynote address by the BTA Chief Executive* at the Regional ICT4D Forum on Botswana. Gaborone Sun, 10-11 March 2010.

19. Ramos, Malia M. (2007). The Role of Librarians in the 21st Century. Presented at the 35th ALAP Anniversary Forum, June 8, 2007. http://www.slideshare.net/confirm/MjYwMDI1Mjk7bW9haGk=/356480-a67d53e4f8af21dfec7dbafa08812185bd9929c5-slideshow (Accessed 14/06/10)

20. Serema, Batlang C. (2002). *Community Information Structures in Botswana: A Challenge for Librarians.* 68th IFLA Council and General Conference, August 18-24, 2002: 1-7.

21. Soumitra Dutta & Mia Irene (Eds). 2009. *The Global Information Technology Report 2008-2009: Mobility in a Networked World*. World Economic Forum. 2009.