Indigenous Knowledge Production, Digital Media and Academic Libraries in Ghana

by

Florence Dedzoe-Dzokoto Plockey fplockey@yahoo.com University Library, University for Development Studies, Tamale, Ghana

Abstract

Digital information and communication technologies have transformed knowledge and technical know-how in the world. Thus, information and communication technologies can play a major role in improving the availability of African indigenous knowledge by enhancing its blending of modern scientific and technical knowledge. However, the perception of indigenous knowledge by past colonial rulers, missionaries, and Eurocentric intellectuals has created the impression that African indigenous knowledge is inferior, primitive, heathen, barbaric and simply not worthy of preserving. To change this perception, this paper proposes that academic libraries can use digital media to preserve and make indigenous knowledge visible so that the future generations may learn about it and therefore, be proud of their past. This paper is forthrightly part of a project where the author has used observations, interviews and a literature review to examine how academic libraries can use digital media to advance African indigenous knowledge delivery in academic libraries in Ghana.

Key words: Indigenous Knowledge, Knowledge Production, Digital Media, Academic Libraries.

Introduction

Media is an important tool that helps us to get better understanding and appreciation to understand our environment, what is going on, and act accordingly. The marginalization of African Indigenous Knowledge System (AIKS) as a result of colonial rule has led some people to question their authenticity and their value as knowledge, capable of collecting, processing, storing, and dissemination by the academic libraries in the 21st century. Libraries could use the media to change this perception.

Libraries and the information profession, particularly those in academic or other scholarly institutions, occupy an important position in relation to Indigenous Knowledge and information. As depositories, collectors, organisers, distributors and mediators of information, librarians play an enabling role to those who produce or who want to use Indigenous Knowledge and sources of information (Nakata, 2002).

The library is the site of knowledge production and this has been collaborated by Makhubela (1990) in Prah (1999: 25) as "...indeed, libraries and information centers have, without question, been regarded as the custodians of wealth of knowledge possessed by a given socially group. They are the mediators of texts, symbols and discourses and can also allow or deny voices the right to be heard". Information gathered in libraries speak of people's subjectivities, identities, power, and knowledge. The questions asked by anti-colonial/post-colonial theorists and which I want to add my voice is who speaks, for whom, under what conditions, and to what extent when examining collections at libraries.

The very nature of education as a social institution that plays a major role in the process of social reproduction of colonial policies, further facilitates the reproduction of institutions rooted in the tradition and history of former colonial powers whose control is perpetuated, and whose search for a permanent presence is actualised (N'Dri, 2006).

Hence, based on a literature review, observation, interviews and my own experience with African indigenous knowledge, this paper aims to make proposals for academic institutions and particularly academic libraries to make use of digital media to promote indigenous knowledge in other to change people's perceptions about it. The specific objectives of this paper will look at: The concept of Indigenous knowledge and the effect of colonization on AIK (African Indigenous Knowledge). It will further discuss digital media; and then deliberate how academic librarians can use digital media to change people's perceptions and understanding about AIK.

The Concept of Indigenous Knowledge

Claxton (2010) states that the term, 'indigenous,' means local or native to the country, the people or the society concerned. Indigenous thus refers to people or things originating from a particular place and native to the place. For example, we may have indigenous Africans, Americans or Australians who originally come from these places. Hunter (n.d) corroborating Claxton's definition, explains that the term indigenous, is used in international discourse to refer to the original people of a particular territory, namely the traditional ethnic grouping who are self-conscious of their pre-colonial use and occupation of the land. Clearly, Hunter (n.d) introduces a time dimension to the definition and that is the use of the term "pre-colonial," which is very critical.

That is to say before the colonial contact and encounter with their territories now dominated by colonizers such as the Europeans, the indigenous people had their own ways of learning and perceptions of their world and the things in and around them. Above all, this definition affirms the originator conditions, systems, values and ways of indigenous group without any pejorative underpinnings.

However, according to Claxton (2010), the term 'indigenous' gradually assumed a derogatory connotation shortly after the beginning of the European colonial adventure in Africa. In the view of Senah, Adusei and Akor (2001:1), the main objective of colonial contact and eventual domination of Africa was to: "Win territories, convert 'heathens' to Christendom and to trade in spices and precious metals. In the pursuit of these objectives, they found some aspects of traditional practices to be obstacles. Indigenous knowledge was viewed as 'inefficient, inferior, and an absolute impediment to development." What started as adventure and personal search for resources by the colonial rulers from the west was immediately turned into a mission of conversion, conquest and domination ideologically, economically and spiritually.

Also, over some time, the term 'indigenous' has been applied solely to non-European peoples, considered inferior to those of the European origins. This has been supported by Maison (2007), who asserts that one cannot read or hear of 'indigenous Englishman.' This assertion is very true of the English, who like other European stocks, are considered cultured and not of nature. Rather, it is common to find categorizations and classifications of indigenous people in terms that highlight their so-called primitivity such as the Australian aborigines, Canadian Indians and American natives.

Hence, the possession of an original quality or indigineity immediately places one in a position of inferiority. Being indigenous thus denotes a backward people from Africa or elsewhere in the Third World or even marginalized group of the First World such as the Roma of Europe and the Natives of the Americas and the Aborigines of Australia, considered under-developed by modernist or Western standards. This distorted usage of the term indigenous has been so systematic and persistent that most peoples in the South have subconsciously come to associate 'indigenous' with 'inferior'. Unfortunately, this cunning association of the term indigenous appears to have influenced our attitudes, our life styles and, more importantly, our choice of development techniques, policies, models, and strategies (Claxton, 2010:3).

The colonialists see indigenous people as a social and cultural identity distinct from the dominant society that makes them vulnerable by the development process. This perception of indigenous by the colonialists, missionaries and Eurocentric intellectuals has created the impression that IK is inferior, primitive, heathen, barbaric and not worthy of preserving. Senah, Adusei and Akor (2001) give the following examples of two European missionaries who as late as 1851 and 1852 made these comments about the people of Ghana formerly Gold Coast.

"They serve the fetish like all Negros in this area. The only remarkable thing about them is that on this mountain there are also a number of cheap harlots who cannot marry. The fetish, they say, has initiated them into this sinful life. The religion of the people is really nothing less than a devil's institution, a cover for all evil and sin..."(by Stanger, 1851).

"Oh, what a pitiful life is such a negro life. And could a healthy moral life unfold itself there? Here, the soul has no living, holy and merciful God to hold on to. There she (the native) has to go down in all the depth of sin. That's how it is with the Negro race. It is a pool of immorality and wickedness into which the Negro people are immersed. Especially the devil of animal lust holds captured and not just men, women, young men, and young women but children of six till eight years old suffer in these chains...' (by Johannes Zimmerman, 1852).

These early negative perceptions of IK have persisted even among the educated African elite and Christian converts who have tended to look down on their own cultural heritage. Kobina Sekyi's "The Blinkards" succinctly captures this fatality of the so-called educated or elite Gold Coaster, now Ghanaian. They have been called several names such as the detribalized, alienated and Europeanized Africans. Such elites have tended to heartily accept anything Westernized to the detriment of their own value systems. African ways of dressing, eating, worshiping, celebrating and even living as well as political, social, economic, and educational systems have been disparaged.

The mission of denigration has been made possible through an alienation-re/acculturation process that has been designed to brainwash and ideological by distance Africans from their roots. Thus, African worldviews and knowledge systems, which form the core of their cultural identity, have been vilified and denigrated. In particular, the systems and process for socializing to preserve and renew African values especially the educational system, have been most targeted (Dei, 2010). Through the process of systematic re-engineering, African values and knowledge systems have been dissipated and replaced largely by Western systems leading to the denigration of everything indigenous. Hagan, (2000) stated this precisely below......

The formal school system in Ghana inherited from our colonial past was as culturally esoteric in cultural content as it was exogenous in origin. Spatially segregated from indigenous cultures of the people for whose cultivation it was designed, it created from the very beginning a culture space for the promotion of foreign values, beliefs, language and modes of behavior.....

The space had many segments. The first segment was the classroom. The second segment was the social space of the school as corporate entity. The third space was the physical environment. And the fourth space was the framework of cultural institutions – churches, theatres, art galleries, museums, libraries and entertainment hall within the community in which the school was located.

Undoubtedly, unless Africans get rid of the stigma associated with the term "indigenous", only then will it be possible to consider 'indigenous' cultures as a development resource rather than a development obstacle and, a possible source of solutions for problems of sustainable development. As argued by Settee (2007) Africans must acknowledge and speak about the sources of empowerment and disempowerment in the past, and its cultural traditions. They must also acknowledge the indigenous capacity to exercise intellectual agency and to engage in self-reflexive knowledge production. In this context, exercising intellectual agency means engaging in a process of recuperation, revitalization and reclamation of African "Indigenous" as a necessary exercise in the empowerment of African people (Hoppers, 2003; Dei, 2010).

According to Sveiby, (1997), knowledge is an intangible resource that exists within the mind of the individual. Knowledge is based on data and information but unlike these, it is always bound to persons. It is constructed by individuals to represent their benefit about causal relationships' or fact or condition of knowing something with familiarity gained through experience or association. Ngulube (2003) is of the view that the concept of knowledge is rooted in western traditions. Meaning, knowledge is defined and shaped by dominant Euro-American cultures.

As far back as 1966, Polanyi, an anthropologist, defined knowledge as the 'process of knowing'. By that, Polanyi (1966), means, all that it takes for one to acquire knowledge. There are different ways of knowing and knowledge is not only the prerogative to the West. There is a proverb in 'Ewe", an ethnic group in Ghana which states: "it is only the child who has not travelled that thinks that it is only his mother's soup that is sweet." All these attest to the fact that the process of knowing includes all the procedures /methods of learning. However, African know-how as posited by Metinhouse (1997) was rarely discussed and textbooks of African history hardly talked about ways in which past generations of Africans coped with the practical problems of daily life.

Knowledge production is not the monopoly of the North of the West. A growing awareness has developed of the wealth of Africa's knowledge base. Historical research, as reflected in UNESCO's eight volume "General History of Africa" has shown that Africa's history is not anywhere near as dark and featureless as had been assumed. Centres of learning have been rediscovered such as those of Jenna and Timbuktu, which rival their contemporaries in medieval Europe. We have been made aware of the contributions of ancient African thinkers and scholars to "classical antiquity" and "western science", or more correctly, to the shared knowledge of humankind. In recent years, an appreciation has been developing of Africa's indigenous knowledge (Lor and Britz, 2005).

My preference is to regard all forms of knowledge as forms of relevant knowledge because each depicts and informs a slice of reality. Different forms of knowledge are often created by different producers, each having unique strengths and limits, and even different methods for creating knowledge. As according to Labelle (1997) just as the world needs genetic diversity of species, it needs diversity of knowledge systems.

Later, Probst and Ramhardt (1998:24) expanded on Polanyi's definition by articulating that:

Knowledge is the whole body of cognition and skills which individual use to solve problems. It includes theories and practices, everyday rules and instructions for action. Knowledge is based on data and information but unlike these, it is always bound to persons. It is constructed by individuals, and represents their benefit about causal relationships.

This means that knowledge is a product of human thought, action and experience. Each culture contains a knowledge base from which its members receive understanding of the world. Knowledge is not the exclusive domain of rich countries, nor of the rich in poor countries and it has been acknowledged as one of the most important factors for sustainable development.

Indigenous knowledge (IK), also known as "local," "traditional" or rural people's knowledge, is not easily defined (Rouse, 1999). Ngulube (2002) indicates that though scholars do not agree on the preferred definition of indigenous knowledge, they have used terms like Indigenous technical knowledge, entho-ecology, local knowledge, rural people's knowledge, and traditional knowledge to capture various forms and aspects of it. That is an indication that the concept has several meanings and connotations.

It would appear, however, that from the various sources above, there are common threads that run through the various meanings offered. This view is also shared by Ngulube (2002) who explains that there is a consensus that IK is experimental, unique and embedded in the head, activities and practices of communities with long histories of close interactions with the natural environment across cultures and geographical spaces. The same view is also shared by (Grenier, 1998; Ellen and Harris, 2002). In addition, researchers have identified common features of indigenous knowledge across cultures and created working definitions such as this one provided by UNESCO:

Indigenous or local knowledge refers to a complete body of knowledge, know-how and practices maintained and developed by peoples, generally in rural areas, who have extended histories of interaction with the natural environment. These sets of understandings, interpretations and meanings are part of a cultural complex that encompasses language, naming and classification systems, practices for using resources, ritual, spirituality and worldview. It provides the basis for local-level decision-making about many fundamental aspects of day-to-day life: for example hunting, fishing, gathering, agriculture and husbandry; food production; water; health; and adaptation to environmental or social change. Non-formal knowledge – in contrast to formal knowledge – is handed over orally, from generation to generation, and is therefore seldom documented. (Cited in Stevens, 2008:26)

The above definition encompasses all forms of knowledge in all fields—which include agriculture, health, foods, social change, and technologies, know-how skills, practices like knowledge transfer and dissemination and beliefs systems like rituals and spiritual world views – that enable the community to achieve stable livelihoods and survival in their environment. It also takes a step further to identify threats to this knowledge or the forces of domination that undermine it that is, formal or western knowledge.

Advocates of indigenous systems of knowledge highlight its transformative potential. For instance, Settee (2007) asserts that indigenous traditional knowledge systems offer an important resource that can develop solutions that take into account detailed local knowledge of the particular environment and people, and their unique characteristics. This increased use of Indigenous traditional knowledge practices could positively transform social and political developmental models. Imagine the transformation that could take place if Indigenous knowledge assumed a valued and integral role in community development strategies.

According to Ermine (1999), Indigenous Knowledge Systems are also about Indigenous people claiming their ethical space; having their knowledge recognized as legitimate and making important contributions to world philosophies. Indigenous Knowledge Systems challenge the notion that only Western knowledge is legitimate (Deloria, 1995). It goes further in pushing us to think about our situation as a struggle against Western hegemonic practices.

Indigenous knowledge is part of the cultural heritage and histories of peoples. Indigenous people are always conscious of a holistic way of life that encompasses spirituality, social governance, and collective community memory. This knowledge is protected by taboos and rituals and it is transmitted orally from generation to generation. It includes concepts, beliefs and perceptions, and experiences of local peoples and their natural and human-built environments.

Digital Media

Digital media are any media that are encoded in a machine-readable format. Digital media can be created, viewed, distributed, modified and preserved on computers (University of Guelph, 2006). Information and Communication Technologies (ICT"s) and digital technologies are omnipresent in the global information society (Udo, n.d). According to University of Guelph (2006), while audio and video have a long history of use in education, the capabilities of digital media, coupled with reduced computing costs, easier-to-use technology, and greater awareness of digital media have increased their use in education, especially during the last five years.

Digital media include e-books, digital videos, social media, computer programs and software; digital imagery, web pages and websites, including social media; data and databases; digital audio, such as mp3s. With the digitalization of knowledge, including Indigenous Knowledge (IK), ICT"s are offering alternative perspectives of knowledge (Udo, n.d). The UNECO Public Library Manifesto (1994), states that, the library services and collections must include all types of appropriate media and modern technologies as well as traditional materials.

Context for Digitalization of African Indigenous Knowledge

The term digitization is often used when diverse forms of information, such as text, sound, image, and video are converted into a single binary code. Hence, digitizing information often makes it easier to preserve, access, share and protect the community's collective memory. For example, an original historical document may only be accessible to people who visit its physical location, but if the document is digitized, it can be made available to people worldwide (Plockey, 2014). According to Sithole (2006), because indigenous knowledge is mostly stored in people's minds and passed on through generations by word of mouth rather than in a written form, it is vulnerable to rapid change. AIK has been exploited, and because of the loss of elders and the significant decline in emphasis on transmission of this knowledge to younger generations in the face of pressures for modernization (IFLA, 2003).

The new generation that spends most of their time on informal education are exposed to western educational system and less to AIK as such there is no appreciation on the existence of IK on their part. In the words of Msuya (2007), the western knowledge has taken over in the educational system. Anyone using AIK as a means to solve problems such as local medical technology is looked down as out dated and considered primitive.

It is necessary to protect and manage AIK because as Liden (1999) puts it "with little notice, vast archives of knowledge and expertise are being lost, leaving humanity in danger of losing its past and perhaps endangering its future as well. The consequent losses to indigenous knowledge is causing cultural gaps between generations and denying the continent the rich and powerful heritage of indigenous knowledge traditions formed by past generations (Macomb, 2004).

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The perception of AIK by our past colonial rulers, missionaries, and Eurocentric intellectuals created the impression that AIK was inferior, primitive, heathen, barbaric and not worthy of preserving need to be turned around. The digital media will make AIK, more appealing to the masses, and people will begin to accept it and integrate it in their development models. Ngulube (2004) stipulates that we need to preserve and make indigenous knowledge visible so that the future generations may learn about it and be proud of their past that was erroneously labeled as primitive by the people who controlled knowledge during the period of foreign domination.

Academic Libraries in Ghana and Digitized Indigenous Knowledge

Academic library occupies central position in knowledge creation and innovation. It is established to meet the information needs in the academia, governance and industry especially as far as the western world is concerned. The library is an integral component of the information system of a country or society. It provides a service or access to information for the society. The challenges of academic library is the failure to recognise Indigenous knowledge as a distinct system of knowledge that requires handling and management regimes for its materials that are different from those applied by the Western system of knowledge management (Nakata, 2005).

Ghana has nine states university libraries in Ghana namely, University of Ghana (Legon), University of Cape Coast (UCC), Kwame Nkrumah University of Science and Technology (KNUST), University of Education, Winneba (UEW), University of Mines and Technology (UMAT), University for Development Studies (UDS), University of Professional Studies, Accra (UPSA), University of Health and Allied Sciences (UHAS), Ho, and University of Energy and Natural Resources, Sunyani. A visit by the researcher between the August 2014 and January 2015 to four of these universities to interact with members about the academic libraries and the digitization of indigenous knowledge revealed a very sad story.

During the interaction it came out clearly that academic library in Ghana for now has nothing to do with indigenous knowledge except it is documented and brought to the library. Below is a statement from one of the respondents.....*In academic libraries we do not deal with oral traditions* (interview, Assistant Librarian, 2015). This sentiment reflects almost all the views of about 21 people interviewed. This interview confirms a similar study by Plockey (2011), when the researcher wanted to know the opinion of the respondents on the issue of AIK. Majority(73.3%) of the respondents admitted that AIK is overlooked in our libraries whilst only 16.7% of the respondents said otherwise. Academic libraries do not consider IK to be part of their collection in the library that will support teaching, learning, and knowledge dissemination. Librarians, as professionals, need to appreciate the need to promote their products and services to ensure awareness amongst the communities that they serve. They should therefore equally see their role also as being that of promotion of awareness and appreciation of IK for communities using ICT and digitized media. This starts with the identification of sources of IK, capturing IK, storing IK and disseminating IK by increasing awareness and promoting access to IK.

Once this is realized, interest in IK will be heightened (Makinde, & Shorunke,, 2013). And the people in the academy will know that there is something good in 'our science' of indigenous knowledge.

Libraries, through the use of Information Communication Technology (ICT), can provide channels for the dissemination of IK of local communities to global audience, thus securing the preservation of IK, besides transforming local communities from consumer of information/knowledge into production of information/knowledge (Tjiek, 2006). This is an obligation with social implications such as cultural rights, livelihoods improvement, personal/community empowerment. For libraries to meet their social obligations they must develop creative ways of applying multi-media that reach the larger members of society. They must provide access to information from oral, digital and many other media comparable to and inclusive of those used by indigenous librarians as the custodians of IK (Greyling, 2007).

Librarians can use ICTs to:

- Capture, store and disseminate indigenous knowledge so that traditional knowledge is reserved for the future generation;
- Promote cost-effective dissemination of indigenous knowledge;
- Create easily accessible indigenous knowledge information systems
- Provide a platform for advocating for improved benefit from IK systems of the poor (Adams, n.d).

Conclusion

Technology and techniques, modes of information and codes of communication play a leading role in human affairs. Technology has taken a steady influence over individual lives. Academic libraries could therefore use digital media to change and project the image and values of African culture and knowledge on the Internet. Globalizing information resources will enable library to maximize their resources to the benefits of the user population.

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References

Adam L (2007) Adam, L. (2007). Information and communication technologies, knowledge management and indigenous knowledge: Implication to livelihood of communities in Ethiopia. Available at: http://www.eictda.gov.et Retrieved from: Date Accessed: 21/5/2014.

Claxton, H. (2010). Indigenous knowledge and occidental science: how both forms of knowledge can contribute to an understanding of sustainability?

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Dei, G. (2000) Rethinking the role of indigenous knowledges in the academy, *International Journal of Inclusive Education*, 4(2), 111–132.

Deloria, V. Jr. (1995). Comfortable fictions and the struggle for turf: An essay review of the invented Indian. In D. Mihesuah. *Native and academics, researching and writing about American Indians*. Nebraska: University of Nebraska Press

Ellen, R. & Harris, H. (2000). Introduction. In R. Ellen (Ed.), *Indigenous environmental knowledge and transformations: critical anthropological perspectives*. Netherlands: Harwood Academic Publishers

Ermine, W. (1995). Aboriginal Epistimology. In M. Battiste, Barman, J. *First NationsEducation in Canada: The Circle Unfolds*, Vancouver: UBC Press

Grenier, L. (1998). *Working with indigenous knowledge: a guide for researchers* (Adobe Digital Edition Version).

Greyling, B. (2007). A model for community participation in African libraries to preserve indigenous knowledge., Nairobi.

Hagan, G. P. (2005). The importance of culture in formal education system and preparation for life. In B. Abdallah (Ed.), *Culture and education: report of the national conference on culture and education* Legon, Accra: Sub-Saharan Publishers.

Hopper, C. A. (2002). Indigenous knowledge systems: towards a conceptual and methodological framework. In C. Odora Hoppers (Ed.), *Indigenous knowledge and the integration of knowledge systems: towards a philosophy of articulation*. Claremont, South Africa: New Africa Books.

Hunter, J. (n.d.). *The role of information technologies in indigenous knowledge management*. Unpublished manuscript, The University of Queensland, St Lucia, Queensland.

IFLA, Initials. (2003). IFLA statements on indigenous traditional knowledge. Retrieved from http://www.ifla.org/lll/eb/sitk03.html Date Accessed : 4/ 6/ 2010

Labelle, H. (1997). Presidential Address, Canadian International Development Agency at the plenary session on global knowledge and local culture of the International Global Knowledge 1997 Conference in Toronto Global knowledge and local culture of the international global knowledge, Toronto. Retrieved from: http:// www.kivu.com/ Date Accessed : 5/ 6/ 2014

Linden, E. "Lost tribes, lost knowledge." 1991: 44-56. Print.

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Makinde, O & Shorunke, O A., (" (2013). "Exploiting the values of indigenous knowledge in attaining sustainable development in Nigeria: The place of the Library. *Library Philosophy and Practice (e-journal)*. Retrieved from: http://digitalcommons.unl.edu/libphilprac/908 Date Accessed: 5/6/2014

Makhubela, P. L. (1990). Libraries for development in South Africa: The black experience. *Language Project Review*, 5(2):5.

Mchombu, J. K. (2004). *Sharing knowledge for community development and transformation: A handbook.* Canada: Oxfam. Retrieved from http://www.oxfam.ca/news-andpublications-reports/sharing-knowledge-handbook-2/file Date Accessed: 4/6/2010

Metinhouse, G. P. (1997). Methodological issues in the study of 'traditional techniques' and know-how. In P. Hountondji (Ed.), *Endogenous knowledge: research Trails* .Dakar: CODESRIA.

Msuya, J. (2007) *Challenges and opportunities in the protection and preservation of Indigenous Knowledge in Africa.* International Review of Information Ethics..7(9) N'Dri, Assie-Lumumba(2006). *Higher Education in Africa: Crisis, Reforms and Transformatio.* Senegal: CODESRIA.

Nakata, M., & Langton, M. (2005). Australian indigenous knowledge and libraries. Retrieved from: http://www.alia.org.au/publishing/aarl/AARL_vol36_no2_2005(reprint).pdf Date Accessed : 4/6/10

Ngulube, P., (2004). 'Using the SECI knowledge management model and other tools to communicate and manage tacit indigenous knowledge', *Innovation* 27, 21-30

Ngulube, P. (2002). Strategies for managing and preserving indigenous knowledge in the Knowledge Management era. Paper presented at Proceedings of the 15th standing conference of Eastern, Central and Southern African library and information associations.

Plockey, F. (2014). The role of Ghana Public Libraries in the digitization of indigenous knowledge: Issues and Prospects. *The Journal of Pan African Studies*, 6,(10), 20-36.

Plockey, F. D. D. (2011). Hidden identity? : thoughts of academic library practitioners in Ghana on African indigenous knowledge . Presented at 2nd Africa regional conference on endogenous development Tamale, 18th-20th August 2011.

Prost, G., Raub, S., & Romhardt, K. (2000). *Managing knowledge: blocks for success.*. Retrieved from: knowledge/97080471/108a24e4da9481e62e(DA: Date Accessed 2/12/2010).

Rouse, J. (1999). Global dissemination of indigenous knowledge: contradictions or the way forward?

Senah, K. A. Adusei, J. K, & Akor, S. A.(2001). A baseline study into traditional medicine practice in Ghana. Accra, Ghana: MOH/DANIDA.

Settee, P. (2007). *Pimatisiwin: Indigenous knowledge systems, our time has come*. (Master's thesis, University of Saskatchew)

Sithole, J. (2006). The challenges faced by African libraries and information centres in documenting and preserving indigenous knowledge. Paper presented at 72nd IFLA general conference and council, Seoul, Korea. Retrieved from http://www.ifla.org/iv/ifla72/index Date Accessed 1/11/2011.

Stevens, A. (2008). A different way of knowing: tools and strategies for managing indigenous knowledge. *Libri*, 58, 25-33.

Sveiby, K.E. (1997) The New Organizational World, San Francisco: Berret-Koehter .

Tjiek, L. T. (2006). Desa informasi: The role of digital libraries in the preservation and dissemination of indigenous knowledge. *The International In formation & Library Review*, (38), 138-1311.

Udo, R. (n.d.). The Role of Information and Communication Technologies in Indigenous Knowledge Preservation. Retrieved from::www.ethnosproject.org/wp-content/.../TheRoleofICTIndigenous.pdf. Date Accessed : 12/2/ 2015.

UNESCO/IFLA Public Library Manifesto. Adopted in 1994

West, R. and Turner L H (2010). "25". *Introducing Communication Theory: Analysis and Application* (4th ed.) Boston: McGraw –Hill Higher Education.