2020

Challenges 1to Building Synergy between Indigenous Knowledge and Academic Libraries in Ghana

Florence Dedzoe-Dzokotoe Plockey Mrs.
University for Development Studies, fplockey@yahoo.com

Charlotte Yembil
University for Development Studies, cyenbil@uds.edu.gh

Banleman Konlan
University for Development Studies, bkonlan@uds.edu.gh

Introduction

In Africa, academic libraries are based solely on Western models of librarianship where borrowed knowledge and culture are propagated as the dominant forms of establishment thus sustaining the colonial heritage. In addition, they have been primarily transmitted through print media and to some extent electronic media; a reflection of their colonial heritage. Against the backdrop of the rich and enduring oral (i.e., word of mouth through proverbs, riddles, stories.), corporeal (e.g., sound, patterns, motifs, colours) and visceral (i.e., instinctive, intuitive, gutty) tradition of African cultural knowledge and sciences.. According to Alemna (1996) the Western model of librarianship leaves out the vast majority of these traditions in its knowledge productions. As such, rural populations who are generally illiterate and are not familiar with the print and/or electronic media have limited or no access to them. More importantly, the challenges of documenting African Indigenous Knowledge (AIK) traditions could serve as an important propeller of innovative forms of documentation where the complex nature of indigenous traditions could be duly registered, stored, shared and used. Libraries will have to find creative and decolonizing ways of capturing and disseminating the strong transdisciplinary roots and form of indigenous knowledge (IK) systems. This remains a great challenge.

It is critical to note that the indigenous oral knowledge culture has neither been endorsed nor acceptable in most of our so-called modern (i.e., westernized) institutions (Haverkort, 2009). Whenever and wherever the issue arise, the discourse of indigenous knowledge and libraries has tended to focus on changing from that oral culture to a written one (Amadi, 1981; Newke, 1995; UNESCO, 1954). Alemna (1996) posits that the insinuation that a strong oral tradition is detrimental to institutionalized library services reflects the dormant (indeed colonial) nature of librarianship in Africa.

Drawing from the above, the paper aimed at contributing to the discourse of building synergies between Indigenous Knowledge Traditions and Academic Libraries in Ghana. The researchers examined available literature on the subject matter in Africa and general to establish the need for and challenges to building synergy between both systems. This paper is organized in different sections: Indigenous Knowledge, Western Knowledge;, Building Synergy between Indigenous Knowledge and Academic Library Systems and finally Looked at the ways forward.

Indigenous Knowledge

Indigenous Knowledge (IK), similarly termed as "local," "traditional" or rural people's knowledge, does not have a single definition (Rouse, 1999). Ngulube (2002) indicates that though scholars do not agree on the preferred definition of IK, they have used terms like indigenous technical knowledge, entho-ecology, local knowledge, rural people's knowledge, and traditional knowledge to capture its various forms and aspects. That is also indicative of its several and diverse meanings and connotations.

 Karbgo (2006) is however of the view that, IK is an important piece of information that is rapidly becoming extinct. There is therefore the need to perverse it before much of it is endangered. Also according to (Stevens, 2008). local communities around the globe are in danger of losing their culture and knowledge traditions. (Stevens, 2008). Without a doubt, IK is thus an underutilized resource in the development process - especially in Africa.

The World Bank in 1998 declared that IK is endangered and needs to be urgently documented and shared. On the other hand, the World Bank (1998) reports that we can learn a lot from IK. It will help us to have better appreciation of the local people and provide measures to improve their lives.

There have been a number of efforts to invigorate and promote IK. Dei (2012) argues that there is a vicious struggle among the academics to appreciate and to come to terms between the prevailing influences in the production of knowledge. He therefore strongly advocates for development based on African contexts and the use of development approaches that nurture indigenous creativity and resourcefulness.

IK is the best alternative to western knowledge and is the basis of the local people understanding. Development strategies that overlook IK usually fail to accomplish their anticipated objectives. (Grenier, 1998; Sillitoe, 1998). Every society needs to protect their knowledge systems: local traditions, organizations, etc. as well as their ability to access knowledge from both local and external sources. The insufficiency of such conditions are the major reason and outcome of Africa's poverty and our dispossession of material deprivation.

Western Knowledge

In today's information and knowledge age, knowledge has become a key driver of progress in any field of endeavour. This realisation does not only occur in business organisations; it manifests in knowledge organizations such as academic libraries as well. This has given rise to a lot of debates across a wide spectrum of political persuasions and especially on the role of academic institutions in producing relevant knowledge.

According to Makhubela the processes whereby knowledge was produced in apartheid South Africa (and still is) was inextricably related to how economic and political power were exercised. This has been illustrated by Kidd (1908) cited by Cobley (1997: 56):

> Academic education gave Africans an exaggerated sense of their own importance: an 'educated native' was a spoiled native'… the only education Africans needed was the inculcation of the proper humility towards superior White civilization and the acquisition of the 'habits of industry', so that they might become more effective workers.

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 (Assie-Lumumba, 2006). While there is agreement about the importance of higher education, especially the universities, in the development of modern societies, the same cannot be said of the roles they have played. Have the types of institutions created in Africa during the colonial and post-colonial era not been at the convenience of our colonial masters? Have these education systems benefited us in the form of releasing our true identities? Or have they rather looked down on our culture?

Knowledge is recognized as power when acquired. It enables communities and societies to develop and advance themselves in whatever environment they find themselves. The adage, knowledge is power, implies that whoever controls knowledge has power (Foucault, 1980). Dei (2000) defines education as varied options, strategies, and ways through which people come to learn, know and understand their world and act within it.

Western control over what constitutes valid knowledge has become increasingly and worryingly noticeable as schools have been structured and restructured to validate only Western knowledge (Adjei, 2007). This has rendered most of us, as an educated people, alien to our own culture. P'Bitek (1889: 19) in Nyamnjoh (2004: 141) had this to say:

> The ways of your ancestors may be good and solid, that reach deep into the soil, their custom neither hallow, nor thin, nor easily breakable or blown away by the winds; but this does not deter the epistemology and its disciples from inviting you to despise these ancestral customs and world view, in favour of foreign customs you may not understand or admire.

This is given expression in Falola's (2012) assertion that even though knowledge is empowerment in an ideal milieu, in Africa an educated person is not necessarily empowered. This is because of the contending forces that confront intellectuals and make nonsense of the acquired knowledge.

There is the need for synergies between indigenous and conventional knowledge and for that matter sciences. The academic library cannot afford to lose out of these proposed synergies.

Building Synergy between Indigenous Knowledge into Academic Library Systems

A lot of work has already been done on the integration of IK into the academic or conventional library system of Africa. These works have tended to examine ways of building functional library systems that serve the needs of African knowledge communities. For instance, Mostert (2001), Ngulube (2002), Witbooi (2006) and Nyana (2009), who work from Southern Africa, have in their works advocated for paradigm shifts in librarianship in Africa. They are of the view that new library services need to be developed to enhance existing ones. This should also aim at preserving IK.

In their studies in Uganda, Dent and Yannotta (2005) and Nyumba (2006) highlight the need to establish centres that would serve as community and school libraries at the same time. They are also of the view that in such library development projects, indigenous ideas should be welcome and integrated in the project. . Sillitoe et al. (2006) and Chisita and Abdullahi (2015) case studies focused on Zimbabwe to show that there are challenges confronting libraries in documenting and communicating IK. As a result, they call on information professionals to include the skills to organize and integrate the oral and written knowledge in library and information studies curricula for the benefit of the society. Other studies on Nigeria by Amadi (1981), Ndiaye (1988), Iwhiwhu (2008), and Okore, Ekere, and Eke (2009), argue that the notion of the "barefoot librarian" is

possible in solving the information needs of rural people. Furthermore, Wiik (2008), whose work focused on Mali, observed that problems confronting libraries today emanate from colonization with its impact on their development.

For these authors who advocate for the adoption of a new library model suitable for our indigenous communities, they do so because the current library model in Africa does not benefit the majority of the population who cannot read and write in the conventional way. For instance, Amadi (1981) is of the view that libraries in Africa are unable to serve indigenous people whose traditions are based on oral culture. Many of them who call for the building of synergies are only looking to use the public library as a vehicle to carry out this task.

Consistent with that position, this analysis acknowledges the role of academic libraries as critical contributors to knowledge generation/production and use. However, it moves beyond that to accord similar roles for IK and its producers. Thus, the IK community becomes a critical player rather than beneficiary who should serve as collaborators in the production of a decolonized, inclusive and functional knowledge system.   Indeed, as the repository of IK, they serve as living libraries. Academic libraries should be able to do this by redesigning their services with and not for the IK community.

In the case of Ghana, there is a paucity of literature on how to promote synergies between academic libraries and IK. Alemna (1994) is the only Ghanaian librarian who has continually advocated on this issue. In his book, *Libraries and information provision in Ghana,* Alemna contends that most of our libraries lack indigenous materials. He again added that the current model of librarianship and library education is out of touch with local reality. Alemna (1996: 14) posits that:

> As Africans continue to modernize, the barriers between the old and the new are being torn down. The isolated village, which preserves the

traditional ways, is searching out new methods of communication such as radio and the printed word. The city dweller, too, often isolated for several generations from the traditional ways of life, is searching out new ways of life which challenges the modern African who can recognize the values of both life styles. It is also this situation that the library is expected to play a major role.

Alemna thus advocates for synergies between traditionality and modernity and between indigenous and conventional knowledge and for that matter sciences. The academic library cannot afford to lose out, it should lead the way. Why then has is not been possible for academic libraries in Ghana to move toward synergy? After all, Ghanaian academic libraries, like other libraries, exist to drive both local and national development. Historically, Ghanaian academic libraries emerged as sites for generating knowledge for the development of people and country. The synergy will enable Academic Libraries to validate Indigenous Knowledge and help preserve the cultural heritage as mandated by the UN Sustainable Development Goals (SDGs). The literature reviewed for this paper unveiled a number of factors inhibiting the push for change as discussed next.

Challenges of Building the Synergy between Indigenous Knowledge and Academic Library Systems

The major challenges to the building of synergy between IK and academic library system identified by this paper were Validation, Documentation, National Policy, and Intellectual Property Rights.

Validation.

Validation or affirmation of IK is about its authenticity. According to Shiva (2000), the argument that the validity of one knowledge system must be confirmed by another, raises an equity question. Many authors admit that the authentication of IK should be by means of a scientific criteria (Rajan

& Sethuramm, 1993; Richards, 1979). Such criteria should be based on its own merit and science. As Grenier (1998) explains, indigenous researchers authenticate IK by observing and conducting thorough interviews of indigenous knowledge holders. This is appropriate since these are indigenous methods of data collection. IK has value and relevance in itself because it is included in the global knowledge.

Nyumba (2006: 4) adds to the debate by stating that:

> Each type of IK practice, technology, organizational structure and human resource should be assessed based on the efficacy of IK, its cost-effectiveness, availability, understandability, cultural appropriateness, effect on different groups of communities, environmental soundness, and constraints plus whether and how they can be overcome. Such criteria would help establish the value of IK and the ease with which it can be applied in development projects.

He invites all stakeholders to work out standards for evaluating IK. He also acknowledges that such may not be an easy task but it is necessary for identifying what the people appreciate.

The inference drawn from the above quote / argument is that scholars need to study the people's opinion of IK. In doing this, we need to combine both insiders and outsiders evaluation as this will help us to identify and appreciate the importance of IK in our daily lives. In other words, the evaluation should not be conducted through the perspective of Western researchers but in collaboration with the IK community.

Documentation.

According to Hansen and VanFleet (2003), documentation is key to protecting and conserving culture and intellectual rights. This assertion is not wholly true because e documentation does not safeguard indigenous people's intellectual rights but rather the opposite unless the documentation activities are as a result of collaboration between the two. In contrast, Paudel (2004) observes that

documentation is a process of validating documents. The fact that IK is not documented in the same ways as conventional knowledge does not make it any less valid. IK is authentic in its own right as it has withstood the test of time. It has lived through all manner of colonialisms.

Briet et. al. (2006) view documentation as a "cultural technique" that speeds up the scientific production and dissemination of scholarly work. But the result of documentation does not only benefit Western science but also leads to revitalization/enhancement of IK. Recording IK is a problem because of its orality and it is embeded in the minds of the holder. As such, it is difficult to capture it in all of its essences even though they are artefacts. It will be calamitous to drive IK into the same losses that have plagued conventional knowledge in its disembodiment.

The World Bank (1998) stipulates that it is difficult to record IK because it is mostly oral. While the oral nature of IK might pose some difficult, the challenge lies beyond its form/mode. For this study, it lies in the ability to appreciate the multiplex nature of IK but especially the inability to develop appropriate tools for its documentation. This analysis argues that collaboration between the academic researcher and IK community should help resolve the challenge.

Below is an example of how a documentation exercise carried out in Lakewood, Colorado, USA from 2003 to 2004, came out with innovative ways of capturing IK while protecting the intellectual property rights of the community using techniques like the multidisciplinary, participatory, and how they were able to document culturally sensitive materials.

Multidisciplinary documentation

The documentation team tapped the expertise of the following: (i) tribal plant experts, as the source of ethno botanical knowledge; (ii) an agronomist from the University of

the Philippines at Los Baños, for training and advice on the documentation of rice morphology;(iii) a forester and a botanist from Central Mindanao University for training and guidance on plant specimen collection, preservation and scientific identification; (iv) a legal expert to provide guidance on the issue of protecting community intellectual property rights; (v) a natural resource management specialist; and (vi) anthropologists/multimedia specialists to provide facilitation and packaging of various knowledge products.

Participatory documentation

The documentation activities were the result of consensus-building and converging interests between the involved organizations and the indigenous communities. The organizations empowered the communities by transferring technical documentation skills to both men and women team members to ensure that the Subanen community undertake as much of the documentation as possible with the organizations in the role of facilitators. The Subanen community members throughout the documentation process from setting research priorities to data-gathering, processing, and the post-processing of knowledge products. The non-literate but knowledgeable community elders acted as information providers while the younger, literate community members worked as documenters.

Source: Suminguit, (2006: 3)

A number of governmental, non-governmental organizations and countries such as COMPAS, CAPTURED, CECIK, UN, UNESCO, CIKOD and the Republic of South Africa, have come up with various strategies to document and share IK in the bid to revitalize it. According to Haverkort (2009: 2), protecting IK for the benefit of indigenous people includes the following:

   a) the extent to which any database is linked to local and indigenous communities in a manner which respects and responds to the dynamic nature of IK and ensures that compilation and classification of data do not atrophy IK;

   b) the capacity of a database to compile, maintain and provide access to IK or local communities in a usable form;

   c) their capacity to control access to and use of IK by third parties; and

   d) the extent to which any database may serve as an effective means to secure recognition of community rights over IK and as a source of evidence of prior art.

After documentation, there is the need to disseminate the information. Warren et al. (1993) explain that the management of IK must include sharing of the information to all stakeholders. As more studies of IK become available, it should be made available in information centers which can be accessed by all. Hence, the need to share and to celebrate the uniqueness of cultures in Africa. The dissemination activities should include both in situ and ex suite methods. All these should not marginalize the rights of the indigenes but project the image of the indigenous people.

Intellectual Property Rights of Indigenous Communities.

Documentation puts indigenous people at risk of losing their intellectual property rights (IPR). Hansen and VanFleet (2003:1), assert that IPRs give "legal protections to people, an exclusive right over the use of his/her creation or discovery for a certain period of time" After a certain period of time you can lose the right over your creative content.

The United Nations stresses the fact that indigenous communities have the right to control their culture, which includes various technologies, arts and sciences. Similarly, the Economic Commission for Africa states that oral traditions in African communities should be utilised fully bearing in mind of IPR. IPR should protect people to benefit from their inventions. Nevertheless, in African traditions, such rights should be given to the whole community since this serves as a way of safeguarding and protecting group identity and existence. See example below.

Examples of Patents Provided to Misappropriation

> *The Turmeric Case:* Turmeric is a plant of the ginger family yielding saffron-colored rhizomes. It has been used as a dye, medicine and flavoring since 600 B.C. In 1280, Marco Polo described Turmeric as 'a vegetable with the properties of saffron, yet it is

not really saffron.' Turmeric has been used medicinally throughout Asia to treat stomach and liver ailments. It is also used externally to heal sores and as cosmetic.

In 1995, two Indian nationals at the University of Mississippi Medical Center were granted a U.S. patent on 'use of turmeric in wound healing.' The Indian Council of Scientific and Industrial Research (CSIR) requested the U.S. Patent and Trademark Office (USPTO) to re-examine the patent.

The CSIR argued that turmeric has been used for thousands of years for healing wounds and rashes and therefore its medicinal use was not novel. Their claim was supported by documentary evidence of Indigenous Knowledge including an ancient Sanskrit text and a paper published in 1953 in the Journal of the Indian Medical Association. The USPTO upheld the CSIR's objections and revoked the patent in August 2002 Rojas (2007:138).

The processes that the two systems can adopt to promote the synergies have been critically analysed. These are necessary prerequisites to any intervention strategies. Both systems must recognise diversity within each system, with its distinctive values and worldviews, ways of learning, methods of communications, and histories are very essential for fruitful discussion and collaboration the two systems.

National Policy on Culture

UNESCO (1954) recognised that culture could assist the understanding of the Millennium Development Goals in African countries.

The Article 2 of UNESCO (1954) policy document states:

Nations shall endeavour to develop the various branches of culture side by side and, as far as possible, simultaneously, so as to establish a harmonious balance between technical progress and the intellectual and moral advancement of mankind.

The Article 2 in the UNESCO document supports my view of promoting IK side by side with indigenous knowledge in the library. This will be my guide in discussing the subject as espoused in this paper.

In the year 2001, the current national policy on culture was developed with the aim of enabling Ghanaians to preserve their cultural heritage ((National Commission on Culture, 2004). In the implementation of this policy, it has been stated that schools, colleges and universities have a major role to play. Also, among the key players in the promotion of our culture are libraries and archives. Libraries are expected to be stocked with documentary materials on Africa indigenous science and technology. The policy also stresses the need to integrate culture studies into our educational curriculum.

Though the policy, as applied to schools and their libraries, is good, problems of implementation have militated against it. The result is that the policy is implemented at the basic educational level; and not in the other levels of education. This lapse is due to the fact that, there is no agency to enforce the law. Even though there is some re- awakening, academic libraries in Ghana on the other hand, do not have any framework or policy that mandates them to collect and preserve IK.

The New Partnership for Africa's Development (NEPAD) recognises the ingenuity of the African people. The culture component of the NEPAD should be integrated into all sectors of the economy including academic libraries.

The Way Forward

Libraries are places of knowledge acquisition, storage, dissemination, authorisation (Reid, 2000) and learning. It is the responsibility of academic libraries to share information and knowledge among the academic community and the society. That is, academic libraries have an obligation to

preserve the history and the knowledge of the community and this must be done in collaboration with the people in the community. According to Maponya (2004), universities do not live in isolation; they are part of the society. Therefore, the knowledge created in the universities through research and teaching should be relevant to the community in which they serve including the indigenous communities. Building synergy of indigenous concepts of education in our education systems will go a long way to the success of members of faculty and students who choose to access this system. To be able to ensure building synergy between IK and academic libraries, the following need to be considered:

- Accreditation agencies must enforce existing policies on IK before any academic program is accredited.
- There is the need to embed indigenous knowledge in the educational curriculum as way of validating and supporting IK as authentic knowledge, which has been tried and tested.
- African educated people have to develop tools for documentation of IK.
- Africans are encouraged to preserve their cultural heritage
- Libraries are expected to be stocked with documentary materials on Africa indigenous science and technology

Conclusion

The analysis above has focused on building synergy of IK and academic library system. Specifically, the paper discusses the traditions and emerging forms that forge complementarities as basis for informing this study on the synergy of living and academic libraries. It reveals that to be able to effectively build synergy between IK into the academic library system, there is the need to overcome the challenges that may confront the process such as: Validation, Documentation, National Policy, and Intellectual Property Rights.

Wary of the challenges, it is important to build synergy that is mutually benefiting. That will require taking an approach that allows for dialogue. The educational curriculum must incorporate African indigenous knowledge and its context to allow people to appreciate the value of it. The inclusion or by way of synergy of IK into the academic library system will help validate it and make it more appealing to the public.

References

Adjei, P. B. (2007). Decolonising knowledge production: The pedagogic relevance of Gandhian Satyagraha to schooling and education in Ghana. *Canadian Journal of Education/Revue canadienne de l'éducation*, 1046-1067.

Alemna, A. A. (1994). *Oral literature as an information source: the organisation of oral literature in academic libraries*. Legon: University of Ghana

Alemna, A. A. (1996). *Issues in African librarianship*. Accra, Ghana: Type and Co.

Amadi, A. O. (1981). *African libraries: Western tradition and colonial brainwashing*. Metuchen,N.J.: Scarecrow Press.

Assie-Lumumba & N'dri T. (2006). *Higher education in Africa: crisis, reforms and transformation.* Dakar, Senegal : Council for the Development of Social Science Research in Africa, CODESRIA Working Paper Series

Briet, S. (2006). What is documentation. In R. Day, E. Martinet, H. Anghelescu & (Eds.). *What Is Documentation? English Translation of the Classic French Text* Toronto: The Scarecrow Press, Inc.

Chista, C. T &Abdullahi, T. (2010). *The challenges and opportunities of preparing LIS students for orally based communities.* Paper presented at World library and information congress : 76th IFLA general conference and assembly, Gothenburg, Sweden.

Cobley, A. G. (1997). Literacy, libraries, and consciousness: the provision of library services for blacks in South Africa in the pre-Apartheid era. *Libraries & culture*, 57-80.

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

Dent, V. & Yannotta, L. (2005). A rural community library in Africa: A study of its use and users. *Libri, 55*(1), 39-55.

Falola, T. (2012). Nationalising Africa, culturalising the West, and reformulating the humanities in Africa. In H. Lauer & K. Anyidoho (Eds.), *Reclaiming the human sciences and humanities through African Perspectives* (Vol. 1, pp. i-907). Accra: Sub- Saharan Press.

Feynman, R. P. (1969). What is science. *The Physics Teacher, 7*(6), 313-320.

Foucault, M. (1980). *Power/knowledge: selected interviews and other writings 1972-1977*. New York: Harvester Press.

Grenier, L. (1998). *Working with indigenous knowledge: A guide for researchers*. Ottawa: IDRC.

Hansen, S. A. & VanFleet, J. W. (2003). *A handbook on issues and options for traditional knowledge holders in protecting their intellectual property and maintaining biological diversity*. Washington, DC: AAAS.

Haverkort, B. (2009). *Revitalising indigenous knowledge and sciences: experiences in endogenous development, education and research.* Paper presented at the Conference Indigenous Studies and Engaged Anthropology: Opening a Dialogue, September.

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

Iwhiwhu, E.B. (2008). Information repackaging library services: a challenge to information professionals in Nigeria. *Library Philosophy and Practice* . Available at: http://unllib.unl.edu/LPP/iwhiwhu3.htm. Retrieved on 20/4/15

Mostert, B. J. (2001). African public library systems: A literature survey. *Library and Information Science Research, 11*(1).

National Commission on Culture (2004). *The Cultural Policy of Ghana*. Available at: http://www.artsinafrica.com/uploads/2011/04/Ghana.pdf. Retrieved on 4/5/2014.

Nawe, J. (1993). The realities of adaptation of Western librarianship to African situation. *African Journal of Library, Archives and Information Science, 3*(1), 1-9.

Ndiaye, R. (1988). Oral culture and libraries. *IFLA journal, 14*(1), 40-46.

Ngulube, P. (2002). Managing and preserving indigenous knowledge in the knowledge management era: challenges and opportunities for information professionals. *Information Development, 18*(2), 95-102.

Nyana, S. A. (2009). Creating a library system that serves the needs of rural communities in Africa South of the Sahara. *Journal of Pan African Studies, 3*(1), 9-23.

Ngwaimbi, E. *(1995). Rural Mass Communication.* Westport CT: Greenwood Press

Nyumba, J. B. (2006). *The role of the library in promoting the application of indigenous knowledge (IK) in development projects.* Paper presented at the Proceedings of the 72nd International Federation of Library Associations Conference, Seoul.

Okore, A. M., Ekere, J. N. a., & Eke, H. N. (2009). *Promoting Access to Indigenous Knowledge in the Digital Age: Libraries as Facilitators*. Paper presented at the 47th Annual National Conference and AGM, Nigerian Library Association, Ibadan, Oyo State

Paudel, K. (2004). Documentation of biological resources and associated traditional knowledge in Nepal. *Evolving Sui Generis Options for the Hindu-Kush Himalayas, xi+ 231*, 211.

Rajan, S., & Sethuramm, M. (1993). Indigenous folk practices among Nilgiri Irulas. *Indigenous Knowledge*.

Richards, P. (1979). Community environmental knowledge in African rural development. *The IDS Bulletin, 10*(2), 28-36.

Rojas, J. (2007) ' Traditional Knowledge and Access to Genetic Resources. Critical Elements Towards a National Policy and Legislation for Chile', *Journal of Technology Management & Innovation*, 2, 134– 48.

Sillitoe, P.; Dixon, P. & Barr, J. (2006). *Indigenous Knowledge Inquiries: A Methodologies Manual for Development (Indigenous Knowledge and Development Series).* London : Intermediate Technology Development Group Publishing.

Suminguit, V. (2006). *Indigenous knowledge systems and intellectual property rights: an enabling tool for development with identity.* Paper presented at the Expert meeting on community involvement in safeguarding intangible cultural heritage: Towards the implementation of te 2003 convention.

UNESCO (1954). *Development of Public Libraries in Africa*, Seminar, Ibadan.

United Nations (2001). *Report of the expert preparatory group meeting on African Virtual Library and Information Network (AVLIN) and knowledge management, Second meeting of the Committee on Development Information (CODI).* Addis Ababa, Ethiopia: Economic Commission for Africa.

Wilks, Y. (1975). A preferential, pattern-seeking, semantics for natural language inference. *Artificial intelligence, 6*(1), 53-74.

Witbooi, S. (2006). Setting up a joint-use library facility: Testing an African model in Wesbank, Western Cape. *Innovation, 32*(1), 41-54

Woodley, E. (2004). Local and Indigenous Ecological Knowledge as an Emergent Property of a Complex System: A Case Study in the Solomon Islands. Paper prepared for the *Millenium Ecosystem Assessment Conference "Bridging Scales and Epistemologies", 17-20 March 2004. Alexandria, Egypt.*

World Bank. (1998). *Indigenous knowledge for development a framework for action.* Washington D. C.: World Bank.