



**Role of libraries in promoting the dissemination and documentation of indigenous agricultural information: Case Study of Zimbabwe**

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**Abstract:**

*Indigenous knowledge in agriculture is so central to local peasants in Zimbabwe to the extent that it has become central to the collection development policies of National and Public libraries. This paper seeks to find out what libraries are doing to promote access to indigenous knowledge in agriculture considering that Zimbabwe's economy is agro- based. It has explored the strategies that libraries are using to disseminate and document indigenous knowledge in agriculture, for example, repackaging of information and knowledge into drama, song and dance. The paper looks at the extent to which local farmers are involved in collection development of indigenous knowledge in agriculture through community publishing and oral traditions initiatives. It high lights the uniqueness of Zimbabwe's indigenous knowledge in agriculture, for example, indigenous indicators to determine favourable time to prepare for farming, plant protection methods, rain making ceremonies and use of organic manure among others. This paper reviews the extent to cultural taboos encapsulate indigenous knowledge in agriculture. Highlight the role of agricultural extension officers (AGRITREX) and Agricultural Research Extension (AREX) in promoting the dissemination of indigenous knowledge in agriculture. The writer will make recommendations on how best to utilize indigenous knowledge in agriculture to improve farming in Zimbabwe.*

**Key-terms:** development; indigenous knowledge; repackaging information; culture; land management.

**Introduction**

Nakata and Langton (2005) note that the Library and Information profession has a great deal to learn if they are to effectively meet the information needs of indigenous people and manage indigenous knowledge in an appropriate way. These calls for a fundamental rethink with regards to strategies on how best to exploit indigenous knowledge to realize the goals of sustainable development. It is common knowledge that the world over, modern science has

begun to recognize the constructive role that indigenous knowledge of the local ecosystem can play in the formulation and implementation of sustainable development policies and projects in developing countries. Escobar (1995:98) notes that indigenous knowledge represents a possible alternative amongst the world's poor "...the remaking of development must start by examining local constructions, to the extent that they are the life and history of the people, that is, the conditions for and of change..."

The International Federation of Library Associations (2003) also acknowledges the intrinsic value and importance of traditional knowledge and local knowledge and the need to consider it holistically as a tool for socio-economic development. IFLA (2008) recommends libraries to collect, preserve, and disseminate Indigenous knowledge, publicise the value, contribution, and importance of IK to both non-indigenous and indigenous people, involving elders and communities in the production of IK and encourage the recognition of intellectual property laws to ensure the proper protection and use of IK. World Commission on Environment and Development (1987:12) echoed similar sentiments as it lamented the threats to traditional lifestyles and called for action to halt an impending catastrophe, "Some traditional lifestyles are threatened with virtual extinction by insensitive development over which the indigenous peoples' have no participation. Their traditional rights should be recognized and they should be given a more decisive voice in formulating policies about resource development in their areas ..."

### **Indigenous Knowledge: Convergence or divergence?**

Nakata and Langton(2005) note that indigenous knowledge is collectively owned and exists as stories, songs, folklore, proverbs, cultural values, norms, beliefs, rituals, local languages, and agricultural practices, including the development of plant species and animal breeds . (2005).Indigenous people and cultures have for long been oppressed and exploited under colonial and after colonialism in the neo –colonial stage. It has been observed that colonial governments in developing countries prevented and criminalized the display of traditional cultural expressions , for example, language, ceremony , dance and drama, hence leading to the cultural disorientation and alienation of local people from their culture. Development has relied entirely on western knowledge at the expense of local knowledge and libraries have remained mere appendages of the former.

Brigs (2005) notes that there is a binary tensions between the two knowledge systems in that , formal scientific knowledge is viewed to be open, systematic and objective while traditional knowledge is viewed to be parochial, intellectual, primitive and emotional.De Walt (1994) notes that indigenous knowledge should be viewed as a complement and not a competitor of western knowledge systems. This has seen farmers in Zimbabwe using the eclectic approach whereby they appropriate those elements that are useful to their socio-economic progress, for example, the use of organic manure as fertilizer is common amongst Zimbabwean farmers. Public libraries can help people, through facilitating access to knowledge independent from bipolar positions but rather as a complimentary.

This cantankerous vituperation of everything indigenous created a state of cultural disorientation amongst the indigenous people especially with regards to identity, food production and conflict resolution among other issues. Williams and Muchena (1991) note that nineteenth century social sciences contributed through ethnic stereotyping and prejudice to current negative attitudes towards indigenous knowledge systems, for example colonialism and western educational systems led to the denigration of everything indigenous. Formal

scientific method which espouses reason as the only way of knowing has been used as tool to alienate indigenous knowledge system for example intuition is regarded as unscientific, yet amongst Africans, this is the sixth sense that has a spiritual or cultural dimension in determining whether its going to rain or not.

The use of indigenous knowledge implies change that comes from within local communities and it reflects local community's confidence in Indigenous knowledge as a tool for socio-economic progress. Agrawal (1995) notes that contrary to negative publicity of indigenous knowledge, there is growing interest in local content and this has come as a result of a fundamental rethink on the part of policy makers "represents a shift from the preoccupation with the centralization technically oriented solutions that failed to alter life prospects for a majority of the peasants and small farmers of the world."

### **Libraries and related institutions: Access to indigenous knowledge**

The UNESCO Public Library Manifesto (1994) describes the public library as the local center of information which provides access to all kinds of knowledge and information. It describes the role of the librarian as that of "an active intermediary between users and resources." The Manifesto further notes that the library services and collections must include all types of appropriate media and modern technologies as well as traditional materials. Wendland(2007) notes that libraries and archives as repositories of formal scientific and indigenous and other cultural materials fulfill vital preservation, educational, scholarly and functions of access for the benefit of whole society.

Libraries and related institutions in Zimbabwe play a critical role in collecting both modern and indigenous knowledge and organizing it for dissemination to the local people. However it appear that most libraries have remained print based yet rural Zimbabwe is predominantly oral shaped. Wendland (2007) further states that libraries and archives as part of the superstructure they need to "reassert cultural integrity, cultural authority, and preservation of context, cultural sovereignty and respect."

Libraries in Southern Africa are a by product of colonial rule and as such they have to grapple with reorienting and reengineering there services in line with the needs of the local people. Burtis (2004) argues that the discord of modern Library and Information systems is that they are oriented towards a scientific logic of information retrieval and access whereby knowledge is reduced into information without due consideration to the cultural context in which it was created. The author further states that it is not enough to catalogue, abstract, classify, index, and digitize materials to facilitate access but what is needed is for Library and Information professionals to put indigenous knowledge into a cultural context. "... Indigenous claims for protection of indigenous knowledge systems and cultural materials lie, albeit perhaps only superficially at right-angles to some of the core objectives of libraries and other information services, such as: freedom of speech, intellectual freedom, diffusion of knowledge, research and learning, access to information and preservation of cultural heritage...."

Okore, (et al.), (2009) state that developing countries are endowed with a wealth of indigenous knowledge but access to such knowledge is hampered by lack of an environment that permits free flow of ideas amongst members of the community. The author recommends libraries to promote access to indigenous knowledge by creating an environment which permits face-to-face forums and network formation to discuss and debate on issues that might

be useful to members of the communities, for example, the use of talk shows promoting intergenerational dialogue between the young and the old on different subject areas ranging from agriculture, ecosystem, medical care, and conflict resolution. Libraries should also use other sources of indigenous knowledge, including indigenous experts, opinion leaders and village elders. Farmer to Farmer interaction involving neighbours, friends or village gatherings in social spaces.

Okore (et.al) (2009) argues that libraries managing indigenous knowledge should not view themselves as owners of such knowledge but rather custodians who are freely available to dialogue with members of the community, through creating social spaces for communities to learn from each other. This implies that when dealing with indigenous knowledge Library and Information Professionals should descend from their elitist and anachronistic ivory towers shrouded by the brick and mortar print based alphabetized services and be able to be sensitive to the pulse of the community with regards to the provision of information to promote agriculture.

Zimbabwe has a well developed library system with higher concentrations in urban areas, for example, the capital city has at least sixteen to eighteen public libraries, while there are others in the outer part of Harare, for example, Chitungwiza and Zengeza and Seke. Libraries range from the academic, public, school and national libraries. These institutions mainly provide print based resources with the exception of Public libraries that have at least embraced an indigenous grounded appeal with regards to the provision of information services, for example, story telling sessions in urban areas are a favourite for children.

### **Avoidance taboos and sustainable development**

Chemhuru and Masaka (2010) note that prohibitions and restrictions through taboos on unsustainable use of certain species, forests, rivers, pools, mountains and other ecological species help to shape environmental ethics that are critical for sustainable development. In Zimbabwe indigenous knowledge is encapsulated in oral traditions in the form of myths and legends, for example totems. Adherence to totems reflects respect for avoidance taboos, for example those belonging to the elephant clan will not eat that animal but hold in the highest regard it. Totems play a critical role in community bonding and sustainable environmental protection because of the strong belief that it is a taboo to kill or eat a totem. They are also ethical tools that foster social cohesion and strengthen relations between human beings and their environment.

The African communitarian view of the human person is premised on the notion that an individual can better be understood from a cultural perspective according to Menkiti (2006). Totems (mitupo) have been in use among the Shona people since the initial development of their culture. Respect for one's totem serves as an instrument of informal social control against the excesses or irregular conduct on the part of the members.

Totems identify the different clans among the Bantu that historically made up the dynasties of their ancient civilization. Currently more than twenty five (25) different totems can be identified among the Shona, and similar totems exist among other Southern African groups, for example, the Zulu, the Ndebele, and the Herero. Taboos are critical in nurturing sustainable use of natural resources. Currently taboos are utilized as a means to protect endangered non-human species, for example, pythons, pangolins and rhinoceros. There is a strong belief that if one kills a python then this will affect rain patterns and this clearly

confirms that Shona culture guarantees protection for endangered species. This knowledge is to some extent available in print form in a few selected libraries and it is accessible to the literate even though its source is oral and indigenous. Public libraries provide space for people to read and learn but they could do more by creating information repositories that will help to preserve such vital knowledge.

### **Permaculture and agricultural production**

Matowanyika (eta.al) in Kunnie(2000) notes that one of the oldest ways of farming that has persisted up to day is permaculture because it has proved to be a better agricultural practice as compared to monoculture .Permaculture is said to help in maintaining soil moisture and reduction of soil erosion caused by running water. The author further notes that that indigenous people used to and continue to use their agricultural knowledge in the form of permaculture whereby different crops are grown together on the same plot of land. The advantage of this approach is that there is provision for permanent cover for the crops and this leads to a reduction of exposure to the sun. These methods of farming have persisted amongst subsistence farmers or small scale farmers as they view it as a sustainable way of farming as opposed to monoculture which is done for commercial purposes. Access to such knowledge can be promoted through repackaging, discussion groups in libraries and related community centers.

### **Traditional Religion**

Shona and Ndebele as Bantu people do not separate religion from day to day life, because from a traditionalist perspective life is anchored on maintaining a harmony between the living, the ancestral spirits and God who are the guardians of the land. Mudege (2008) notes that there are a variety of traditional religious functions which celebrate good harvest, for example “doro remusha” celebrates and thanks the benevolent ancestors for their blessings. The author further notes that there is also beer of good harvest “goho” which celebrates good harvests. During times of drought people brew beer to appease the ancestors to provide rain after prolonged periods of a dry spell which might threaten the planting season. This great cultural event is known as “Mafuwe” among the Korekore and “Mukwerera” among the Zezuru. Africans did not have cloud seedling technology and they had to rely on rain making ceremonies to appeal to God for rain and avoid natural disasters. These traditions still remain intact in the form of oral traditions commonly held by chiefs and spirit mediums. Mararike (1993) in Mudege (2008) notes that “the relationship between the living, the dead and God was intertwined... the natural world and the human world and spiritual world are closely related”

This traditional knowledge is not documented but it exists in the community and it is passed on from one generation tom another orally. It is the knowledge that has helped to sustain the lives of the rural people .Public Libraries can make use of this knowledge through repackaging information and facilitating access to this knowledge through talk shows and discussion. This will require libraries to be proactive and implement community engagement programmes that promote synergies between the young and the old through intergenerational dialogue. The Public library has a cultural, informational and educational mandate to provide service to the public especially those with a strong inclination towards culture and development.

## **Libraries and access to agricultural information: Need for a fundamental rethink**

Amadi (1981) is sceptical that African libraries are incapable of playing the role of information providers or storehouses of African cultures and traditions grounded in oral traditions. Allema (1995) carried out a study in Nigeria, Kenya and Tanzania and found out that there are common need for agricultural information with regards to agricultural skills, marketing of produce and basic health skills which are not catered for by the Western model of librarianship. The ideal African library should be a social space whereby traditional and modern technology converge to promote a synergy of ideas as reflected by Nyerere's speech "Adaption is required in the creation of information structures and methodologies that would encompass Africa's traditional resources and modern knowledge resources. Information Management and marketing strategies: acquisition; dissemination and use of relevant information; modification of information seeking behaviour; and most of all ; the inertia of perceiving and expressing problems in terms of external factors, are factors that need immediate attention...."

Williams and Muchena (1991) highlighted the importance of collecting, organizing and developing indigenous knowledge to increase productivity. They called for a developmental approach that builds on the knowledge that indigenous farmers already have and how to use that as the foundation for promoting sustainable agriculture capacity development programmes. It has been observed that where conventional weather information is not easily accessible, there is need to make use of Indigenous knowledge to predict the amount of rainfall for that agricultural season, and inform the farmers' cropping activities.

Mutasa (2009) noted that scientific research in Buhera and Chikomba revealed that there was heavy reliance on indigenous knowledge and speculation through the use indigenous rainfall prediction indicators, for example high number of spiders web will indicate a wet season, circular halo of the moon, animal and plant behaviour, as well as wild fruit availability and wind direction prior to the rainy season. Williams and Muchena (1991) called on government to consider protecting indigenous knowledge through equipping information professionals with "...skills to identify, collect, and develop indigenous knowledge into contemporary usable formats." The authors further state that by starting with the farmers' indigenous knowledge, educators can move from the general to the specific, from the concrete to the abstract in the process of promoting sustainable agriculture.

## **Radio and Television as conduits for disseminating indigenous knowledge**

Zimbabwe has two television channels and four radio stations which broadcast to the nation in the official as well as indigenous languages. Electronic media has a slot for agricultural programmes that are broadcasted in English, Shona and Ndebele the official languages. The National television station invites experts on various subjects ranging from crop to animal production. These experts will draw their knowledge from both traditional and formal scientific knowledge systems, for example, the advantages and disadvantages of organic and inorganic fertilizers to agricultural production. Programmes are broadcasted every Thursday in the official indigenous languages. In urban centers like Harare people have access to internet. There is also a digital divide between urban and rural areas because of lack of electricity. However the Rural electrification programme has made inroads into certain rural areas especially growth points even though there is still a long way to go. Libraries in rural areas are concentrated in growth points and financed by local authorities with the support of

the National government even though current economic challenges undermine efforts to fully provide equitable access to information to all.

### **Libraries as cultural institutions**

Welford (2011) states that every country has its own cultural traditions that it seeks to preserve for future posterity. Traditions which a society preserves become the bedrock of the country's norms and values that unify the community. The national library and documentation Services (NLDS) embarked on an ambitious project to build centers through-out the country. This resulted in the development of the multi purpose Murehwa cultural House with space for reading, an auditorium, exhibitions dances and other cultural activities. The cultural aspect was meant to allow the library to tap into the indigenous knowledge of the surrounding communities and thus promote development. Walford (2011) notes that when Murehwa Culture House first started operating “ ... visitor would be greeted by the sharp rattling sound of wooden instruments being shaken followed by a loud and deep drumbeat, wild ululations and earsplitting whistles....”

The economic challenges made it impossible to develop libraries with a high cultural orientation that transcend print oriented culture .However desperate situations call for desperate solutions, the introduction of donkey drawn mobile libraries has helped to fill in the void by providing access to information in the most remote places. The Rural Library and Resource Development Programme (RLRDP) founded in 1990 have inspired teachers colleges, for example, Seke Teachers College to also explore the idea of mobile libraries for student teachers scattered in rural areas. The main aim of mobile libraries is to provide information to the most remote rural areas and bridge the information divide or apartheid.

### **Agricultural Extension Officers (AREX) as agents for disseminating agricultural information**

The concept of agricultural extension dates back to the beginning of the twentieth century when Emory D. Alvord, Department of Conservation and Extension (Conex) and the Department of Agricultural Development (Devag) were established. The former had the institutional mandate to provide advisory services to white large-scale commercial farmers, while the latter was meant to service native smallholder farming communities. When independence came 1980, the Department of Agricultural, Technical and Extension Services (AGRITEX) was formed as an amalgamation of Conex and Devag. In 2001 Agricultural Research and Extension (AREX) was born through the merger of the Department of Agricultural Research and Specialist Services (DR&SS) and a major portion of the former extension and technical department (AGRITEXT). AREX's main drive to mobilize the agricultural sector of Zimbabwe for increased and sustainable agricultural production and, provide appropriate agricultural technical, professional and other support services to the agricultural industry is dependant upon effective utilization of information and knowledge.

AGRITEXT is now relying on a number of relatively new agricultural extension approaches which are community centered, for example, participatory extension approaches, participatory learning approaches, participatory rural appraisals, rapid rural appraisals, participatory technology development, farmer field schools, innovative farmer workshops, and look-and-learn tours. These bottom-up approaches enable farmers to take the initiative, make decisions and choose among different service providers, based on an organization's ability to deliver appropriate services.

Agricultural extension officers are critical in facilitating access to information on scientifically proven methods of improving agricultural yield. They also build on from what the farmers already know with regards to local knowledge. Field days provide farmers with a platform for collective workmanship, and this helps to enhance agricultural productivity and boosting food security. The idea behind field days is to afford farmers an opportunity glass case results of what they would have been doing throughout a season while extension officers also use the occasion to make an assess on the farmers' observance of the technical advice they get from extension agents.

During a field day emphasis is more on ploughing depth, planting dates, planting distance, plant population, fertilizer application and even the targeted yield. The field day provides an opportunity for farmers to exchange experience and best practices relating to agriculture. Libraries should be able to network with AREX, local authorities and communities to capture and document success stories and create repositories for future references. Inter-institutional collaboration between libraries, communities, government and other stakeholders like opinion leaders in the design of library services with an indigenous orientation will help to enhance their educational, informational and cultural role.

### **The Municipal Development Partnership Eastern and Southern Africa Urban Agricultural programme (MDPESA) (UAP)**

The Municipal Development Partnership provides a library service to those interested in urban agricultural information. The unit provides various types of services and resources exist in the form of multimedia technology in the form of full text databases and bibliographic database, experts' databases, photographic and research information relating to various aspects of urban agriculture. Urban agriculture refers to the domestication of plants and animals for food and other uses within parameters of urban and peri-urban areas, and related activities such as the production and delivery of inputs, and the processing and marketing of products. The institution also facilitates debate and discussion on the role of urban agriculture in promoting economic growth, urban food security and employment creation through electronic and print media. The library contains information on both modern and indigenous knowledge relating to urban agriculture. The library provides space that integrates print and modern technology to facilitate access to information for scholars, policy makers and farmers or those interested in urban agriculture using both modern and traditional knowledge.

### **Higher Education and promotion and access to indigenous knowledge**

Zimbabwe has a total of thirteen (13) agricultural colleges located in all the Provinces of Zimbabwe, six of which offer Diplomas in agriculture namely Chibero, Gwebi, Mazowe, Rio Tinto, Mlezu and Esigodini while the rest offer certificates. There is at least one agricultural college in each Province of the country. These libraries are complemented by Public libraries, College libraries and other Special libraries in Government Ministries and Non-Governmental Organisations. University libraries also provide agricultural information relating to both local and western knowledge systems. However these institutions are accessible to the formally educated at the exclusion of the general communities. The goal of African Renaissance can only be achieved through ensuring that the educational and cultural institution remains part of the peoples ways of life.

Universities are helping to promote indigenous knowledge in agriculture through integrating traditional with formal scientific knowledge, for example, the Faculty of Agriculture and Natural Resources of the Africa University seeks to promote a holistic approach to life and recognition for the inviolability of the environment. It intends to achieve this by establishing a dynamic community of learning committed to teaching, research and extension that addresses the challenges of food production to meet the dietary requirements in Africa, encourage income generation to improve the quality of life of current and future generations through improved agricultural practices and the sustainable management of natural resources.

Africa University has an indigenous Acacia tree set against the background of a rising sun as its logo and this is symbolic of the institution's goal to promote and sustain socio-economic development by integrating indigenous knowledge and modern scientific knowledge. Libraries in Higher and Tertiary Education have a critical role to play as the engine that drive the natural processes by which members acquire knowledge skills and attitudes appropriate to their local life. This is in line with Thabo Mbeki's (2005) call at the Association of African Universities conference "...higher education has an important role to play in the economic, social, cultural and political renaissance of our continent and in the drive for the development of indigenous knowledge systems (IKS)"

### **Libraries and Information Repackaging**

Saracevic and Woods (1981) and Bunch (1984) use the term information repackaging to refer to the way an information service selects appropriate materials, reprocesses and packages the material according to user specifications. Repackaging can be done through various forms for example, popular theatre, drama, story telling and the use of songs. Modern technology makes it much easier to repackage information through integration of text and graphics and texts. Information technology assists in repackaging information into oral form, for example, the use of podcasts in rural areas to record oral history and songs. The use of tape recorders also assists in capturing a fading memory with regards to traditional knowledge in agriculture. Repackaging of information help in locating, retrieval, evaluation, interpretation and repackaging of information on a particular subject area.

Modern technology is important in repackaging information because Information and Communication Technologies (ICT's) are free from the fetters of time and space. Libraries need to utilize modern technology to promote access to indigenous knowledge with regards to promoting a culture of knowledge sharing amongst farmers. Tsiko (2004:9) suggests an alternative to the repackaging of indigenous knowledge through documentation. The author states that this is critical at a time when traditional knowledge is being marginalized by high culture resulting in assimilation and cultural genocide. With due consideration to intellectual property rights, it is imperative to document this knowledge that has practical uses in agriculture, forestry, health and sustainable development.

Libraries need to be proactive and promote community publishing, so that communities are able to document their experiences and market as well as share with others. Programmes to repackage traditional knowledge will also help to integrate Western and indigenous knowledge to generate knowledge to tackle the environmental challenges with regards to land management .Community libraries working with communities and other stakeholders can encourage research, recording and documentation and use of hereditary knowledge system to showcase how these can be used in managing natural and cultural elements, for example ,

Public libraries use of story telling sessions helps to unlock the great potential encapsulated in indigenous knowledge systems.

### **Recommendations**

1. Strengthening synergies between Public libraries, agricultural extension officers and local communities
2. Promoting community engagement.
3. Identifying and promoting potential sources of traditional knowledge and story tellers.
4. Education local people on Intellectual Property rights with reference to communally owned knowledge.
5. Empowering local people through information to capitalize on there communal knowledge.
6. Provide space to integrate traditional and formal scientific knowledge.
7. Using public libraries to promote intergenerational dialogue relating to knowledge.
8. Incorporating indigenous knowledge as key component of the educational curriculum, for example inclusion of indigenous knowledge in education for sustainable development.
9. Utilization of modern technology (ICT's) to repackage information to meet user needs
10. Higher and Tertiary Education and Industry should collaborate to support and conduct research on indigenous knowledge in agriculture.
11. Balancing library collections by including print, electronic and oral forms that cater for indigenous knowledge.

### **Conclusions**

Public Library services are essential public access points because people feel comfortable to rely on their free information services. However, in the current information centric age Libraries need to do more to promote access to indigenous knowledge through establishing knowledge centres that provide access to all forms of knowledge. There is need to transform the library service from its straightjacket to a community oriented service that takes cognizance of indigenous knowledge for sustainable agricultural production. This calls for what Ivan Illich called “**deschooling**” the scientific community so that they relearn and value traditional knowledge. Furthermore this will also call for the redefinition of knowledge, and an endorsement of indigenous knowledge as a complement to formal scientific knowledge in the drive to realize the goals of sustainable development and bring to an end the unsustainable culture of poverty, intellectual bankruptcy, greedy consumerism and environmentally unfriendly methods of agricultural production.

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