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Role of Libraries in Preservation and Accessibility of Indigenous Knowledge: A study of University Libraries in Northeast India

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1. Introduction:

The cultural practices and way of life of indigenous communities worldwide are also known as indigenous knowledge. This knowledge has been transmitted for generations amongst the indigenous communities, mostly orally, and is a reflection of their history and identity. Indigenous knowledge is concerned primarily with those activities that are intimately connected with the daily livelihoods of people rather than with abstract ideas and philosophies. Indigenous knowledge is thus confined to local population that possesses highly detailed and richly complex information about agriculture, agro-forestry, pest management, soil fertilization, multiple cropping patterns, health care, food preparation and so forth. Local knowledge also called indigenous knowledge is often viewed as the latest and the best strategy in the old fight against hunger, poverty and underdevelopment (Atte, 1989). Indigenous knowledge has permitted its holders to exist in “harmony” with nature, using it sustainably, it is seen as especially pivotal in discussions of sustainable resource used (D,Anderson;R, 1987).

The knowledge and skills are derived from man’s daily interactions with the environment, observations and experiments. They greatly shape and model the decisions made by people regarding exploitation of resources. The knowledge, skills and practices relating to natural resources are passed down to generations through the cultural learning process. It is the outcome of all these among different groups and the environment that is termed indigenous, local, tradition or people’s knowledge (Akullo, Kanzikwera, & Birungi, 2007). In simple terms, such knowledge has been orally passed for generations from person to person. Some forms of indigenous knowledge are expressed through stories, legends, folklore, rituals, songs, and even laws. Other form of indigenous knowledge refers to knowledge and values, which have been acquired through experience, observation, from the land or from spiritual teachings,

and handed down from one generation to another. 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, and spirituality and worldview. It provides the basis for local level decision-making about many fundamental aspects of day-to-day life (Agrawal, 2004).

According to Marie Battiste (2005) Indigenous knowledge embodies a web of relationships within a specific ecological context; contains linguistic categories, rules, and relationships unique to each knowledge system; has localized content and meaning; has established customs with respect to acquiring and sharing of knowledge and implies responsibilities for possessing various kinds of knowledge. Indigenous Knowledge develops over centuries; therefore, it represents all the skills and innovations of people, and embodies the collective wisdom and resourcefulness of a community (Ntui & Ottong, 2008). However, preservation and dissemination of indigenous knowledge is very essential for posterity and accessibility of documented knowledge for decision making in developmental growth.

Statement of the problems:

Indigenous knowledge plays a vital role in development process of all sustainable livelihoods. It enhances the cultural understanding of local communities and act as basis for problem solving mechanism in the complex dimension of development. Over the years however, indigenous knowledge has been gravely threatened by factors like dilution and even extinction (due to misinterpretation by existing practitioners and death of the original practitioners) and replacement by modern practices, especially with the proliferation of computer technologies. The preservation of indigenous knowledge has become a global concern today. The world is waking up to the urgency of identifying, locating and preserving indigenous knowledge. In view of this, this study set out to examines preservation and accessibility of Indigenous Knowledge by library personnel in selected libraries in Northeast India.

2. Review of Literature:

While literature on documentation of indigenous knowledge is quite vast, it is yet scant on the topic under study i.e. Preservation and Accessibility of Indigenous Knowledge: Role of Libraries in Northeast India. Following is a review of the literature more related to the topic at hand:

2.1 Significance of indigenous knowledge

Indigenous knowledge is embedded in a dynamic system in which spirituality; kinship, local politics and other factors are tied together and influence one another. Spiritual beliefs about nature may influence how resources are managed and how willing people are to adopt new resource management strategies (IIRR, 1996a). The primary dimension of difference and uniqueness, according to Warren (Warren, 1991), seems to lie in an organic relationship between the local community and its knowledge. An understanding of indigenous knowledge and customs can help the development planner to establish a more flexible position to suggest project alternatives or innovative mitigated measures, in order to avoid inadvertent damage to the ecosystem or culture (Lalonde, 1991). Anyira, Onoriode, & Nwabueze (2010) in their study argue that, there is a growing appreciation of the value of indigenous knowledge and it has become valuable not only to those who depend on it in their daily lives, but to modern industry and agriculture as well.

2.2 Need for preservation of indigenous knowledge

Most of the indigenous knowledge disappears due to the intrusion of foreign technologies and development concepts that promise short-term gains or solutions to problems without being

capable of sustaining them. The tragedy of the disappearance of this knowledge system is most obvious to those who have developed it and make a living through it. But the implication for others can be detrimental as well, when skills, technologies, artifacts, problem solving strategies and expertise are lost (Senanayake, 2006).

Indigenous knowledge cannot be easily wiped away because it is deep rooted in people's culture. Nature itself has provided a unique and peculiar way of doing things. This peculiarity and uniqueness provides unto such a people, a mark of identity otherwise known as culture. This also provides unto such a people, a means of surviving within the environment. Necessity, as is commonly said, is the mother of inventions (Mathias, 1995). It is thus evident that if indigenous knowledge is not recorded and preserved, it will be lost and remain inaccessible to other indigenous systems as well as to development workers. Development projects cannot offer sustainable solutions to local problems without integrating local knowledge (Warren, 1991). Development needs people's knowledge. Otherwise it can be a failure in the process (Stubbings, 1982). Therefore, to bring development in local-level community, indigenous knowledge plays a very important role. The use of indigenous knowledge can guarantee the survival of the economics of the developing world. Not only the expertise of scientific knowledge of professional should be taken into account for improving development, even the richest and most successful governments cannot provide all the needs of the people, it has been suggested that indigenous knowledge can also become vital tools for rural development (Atte, 1989). The generation, adaptation and use of indigenous knowledge are greatly influenced by the culture. Economic, social, political and geographical contexts also contribute to generate indigenous knowledge, but to a lesser extent. Therefore, indigenous knowledge systems show great diversity not only among ethnic groups but among locations also. Since indigenous knowledge is essential to development, it must be gathered,

organized and disseminated in the same systematic way as modern knowledge (Agrawal, 2004).

2.3 Role of libraries in promoting indigenous knowledge:

Libraries has a gigantic role in promoting indigenous knowledge as it is regarded storehouses of knowledge, where recorded knowledge is collected, organized for retrieval, preserved and made available for use. One of the uses to which recorded knowledge is put is the production of new knowledge. Librarians take this in their stride, but the fact remains that their focus is on existing documents, albeit that the term document is used to refer to the full range of information carriers, including audio-visual and electronic material as well as printed books, journals and newspapers (Lor, 2004). Yet this still excludes the greater proportion of IK, which is not recorded, but resides in the minds of the knowledge holders and is transferred by word of mouth (Ulluwishewa 1993). On the contrary, many academics and development professionals are yet to appreciate the value of indigenous knowledge as a valid mode of learning, research and application for sustainable development and socio-economic transformation of the rural community and society at large. This is not surprising because until lately, this mode of learning was yet to be given recognition in the academic curriculum of universities, research institutions and private firms relying heavily on formal scientific methods (Bisong & Andrew-Essien, 2010).

According to (Willett, 1993) indigenous knowledge has two fundamentally different meanings in today's world. One is the utilitarian understanding of modern culture. This sees indigenous knowledge components as useful for incorporation in the mainstream of development in pursuit of efficiency, sustainability, and similar goals. The other is the sacred understanding of indigenous peoples whose holistic perspective is only dimly perceived by modern culture. Local community members have knowledge relevant for the management and conservation of natural resources and the environment. Such knowledge includes biological and ecological

knowledge of phenology or plant distribution that can be used to identify prime areas for the collection of planting material to restore degraded areas or for domestication (Tabuti, 2006). Local communities are known to promote the natural regeneration of plant species by sparing or protecting naturally regenerating plant species around the homestead (Tabuti et al., 2009). Indigenous knowledge as a whole is based mainly on locally available resources such as land, water, local knowledge; culture and the way people organize themselves. Indigenous development strives to optimize the dynamics of these resources, thus enhancing cultural diversity, human welfare and ecological stability (Jaya, 2006). The importance of local/indigenous knowledge and its potential in the sustainable use of natural resources has been emphasised repeatedly in international discourse on sustainable development (Akesbejo-Samsons, 2009).

Despite the immense role that IK can play in socioeconomic development, many people outside the immediate community or sometimes even within the community are unaware of this potential and remain sceptical. Thus, there is also a need to raise awareness, through dissemination among the community, of the most appropriate knowledge and technologies, and the benefits of adopting them (Tabuti & Van Damme, 2012). Similarly, in the institutions of higher learning, more can and should be done to advance the consideration of, respect for, and inclusion of indigenous knowledge's within the academic paradigm. The generative curriculum is one approach that attempts to do so, but it is hampered by the legacies of colonial and rationalist modes of thinking that continue to dominate and promote exclusive approaches to knowledge generation. This is a difficult but a necessary task if we are to take seriously the notion of inclusive, participatory and emancipatory knowledge generation (Schafer et al., 2004). There is therefore an urgent need to preserve and promote this very important resource. To preserve such knowledge, a new path must be charted and a paradigm

shift is imperative. All stakeholders must be involved - governmental, and non-governmental bodies as well as the local people themselves (Okoye & Oni, 2017).

2.4 Role of Libraries in Preservation of Indigenous Knowledge

The increasing global recognition of Indigenous knowledge as distinct, legitimate, valuable and vulnerable systems of knowledge raises a range of issues that pose challenges for the library and information services (LIS) sector (Nakata et. al, 2005). 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 repackaged traditional knowledge will also help to integrate Western and indigenous knowledge to generate knowledge to tackle the environmental challenges with regards to land management (Libraries & Interest, 2011). The primary objective of any library is preservation of information and knowledge for its users. Indigenous knowledge is an emerging field in the Library and Information Profession and has gained wider acceptance in the present global society which hitherto has generated a lot of concern on the need for its preservation for posterity, access and use. Libraries and archives are custodians of knowledge and cultural heritage; they hold drawings, paintings and other documentary artifacts, including manuscripts, records, books, audio-visual items, etc. (Abdulmumin, Bashorun and Omopupa, 2012). Byrne (2005) viewed archives, libraries, and museums as treasuries of Indigenous experience, knowledge and history. Nakata and Langton (2005) maintain 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. Libraries can help in collecting, preserving, and disseminating indigenous knowledge and publicizing the value, contribution, and importance of indigenous knowledge to both non-indigenous and indigenous people. The National Library of South Africa deals with making recorded indigenous knowledge available for users (Lor, 2004). Furthermore, IFLA (2008) emphasized the need for libraries to collect,

preserve, and disseminate indigenous knowledge, publicize the value, contribution, and importance of indigenous knowledge to both non-indigenous and indigenous people, involving elders and communities in the production of indigenous knowledge and encouraging the recognition of intellectual property laws to ensure the proper protection and use of indigenous knowledge.

2.5 ICT application in preservation of IK:

The availability of ICTs, especially the free access to Internet, is an important contributor to access of information for communities (Mhlongo & Ngulube, 2019). ICTs hold significant potential for supporting the recording, management, dissemination and long term preservation of Indigenous knowledge. But there remain significant challenges which will need to be overcome to ensure that such projects deliver real benefits to both the Indigenous communities who own the knowledge and the wider community (Nakata, Byrne, Nakata, & Gardiner, 2005). The multi-media capabilities (*e.g.* digital video and recording devices), storage capacity (*e.g.* online databases) and communication tools (*e.g.* the Internet and digital technologies) offered by ICTs provide new opportunities to preserve and revitalize indigenous cultures and languages.

2.6 Accessibility to and management of IK in the Library:

The main objective of all information management activities is to provide access to collections and materials. Though there is so much indigenous knowledge in different indigenous communities of the developing world, the availability of such knowledge does not mean its accessibility or use. Libraries can 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, libraries can organize talk shows involving traditional rulers, elderly people and professionals to gather and record information on various local vocations from different subject areas

ranging from agriculture, ecosystem, medical care, and conflict resolution (Okore, et al., 2009). They also argue that, libraries can work in partnership with library schools to create indigenous knowledge collections, which can be repackaged and made accessible. Stevens (2008) believes that libraries and information professionals should partner with indigenous communities. Nakata and Langton (2005) suggest that libraries and archives must look at the broad issues involved in the preservation of IK. They assert that libraries must consider IK not simply as part of a historical archive, but a contemporary body of relevant knowledge. There is therefore the need to provide ICTs such as computers, Internet, digital cameras, camcorders, and so on, to allow libraries to make IK accessible (Okore, et al., 2009).

Managing indigenous knowledge in libraries requires collection development associated policies and strategies. The libraries should be proficient with new developmental challenges. They should be well equipped with newly generated technologies to counter all sorts of competitions. There should be adequate and well trained manpower in the libraries' management and preservation activities. Each library should be in the position to employ an expert who understands the required information of the physical and chemical nature of the materials in their library holdings. Local practitioners and stakeholders of local indigenous knowledge form the vital part in the decision making process. According to Okore, et al., (2009) challenges of indigenous knowledge management include:

- Intellectual property rights
- Labour requirements
- Time requirements
- Funding
- Reluctance of indigenous people to share their knowledge
- Competition with existing community structures for IK

3. Objectives:

- i. To find out how libraries preserve indigenous knowledge
- ii. To examine how libraries create access to indigenous knowledge
- iii. To investigate the challenges in preservation of and accessibility to indigenous knowledge.

4. Methodology:

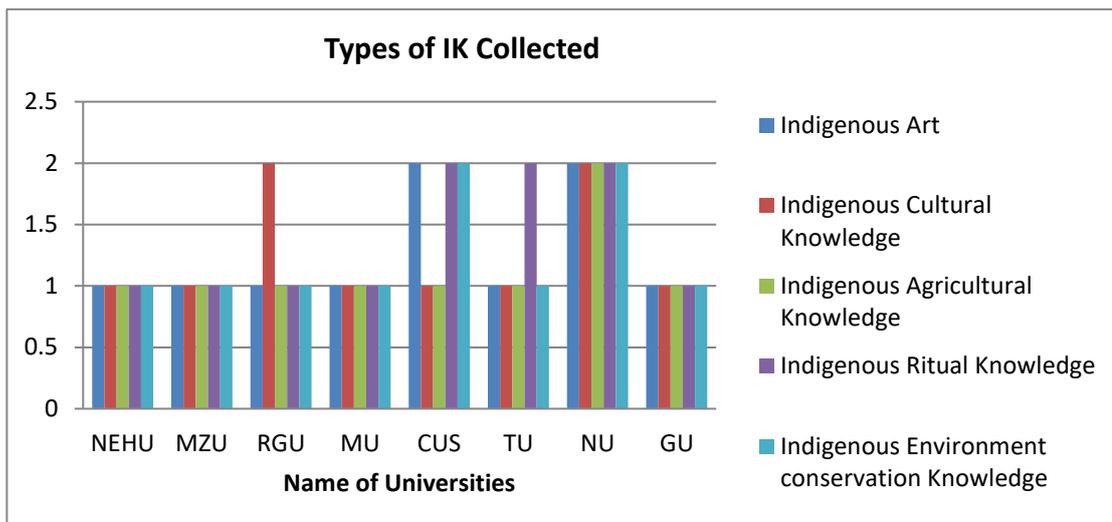
A questionnaire was designed and distributed to Chief librarians of university libraries in 8 states of North East India. The questionnaire contained both structured and unstructured questions. University libraries were selected for the study, as research on indigenous knowledge is carried out in these universities from various disciplines. University libraries are also information hubs for other researchers and are thus the right centres for documenting indigenous knowledge.

The libraries investigated were North Eastern Hill University (NEHU) Shillong, Mizoram University (MZU), Nagaland University (NU), Central University of Sikkim(CUS), Tripura University (TU), Gauhati University (GU), Rajiv Gandhi University (RGU) and Manipur University (MU).

4.1 Data analysis:

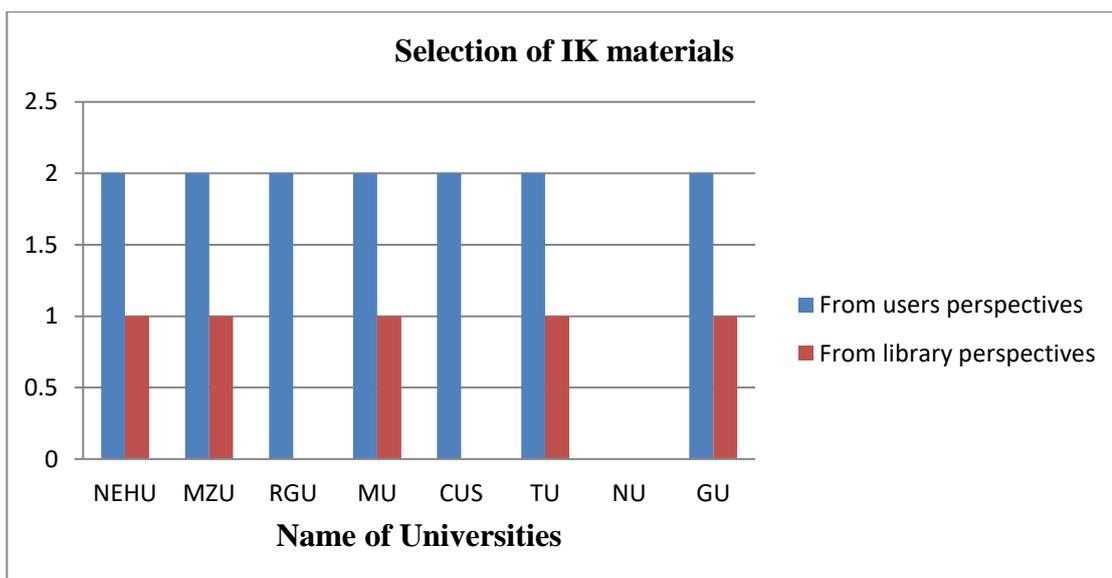
Data collected were analysed using statistical tools and charts.

Chart 1: Types of indigenous knowledge collected by libraries under study.



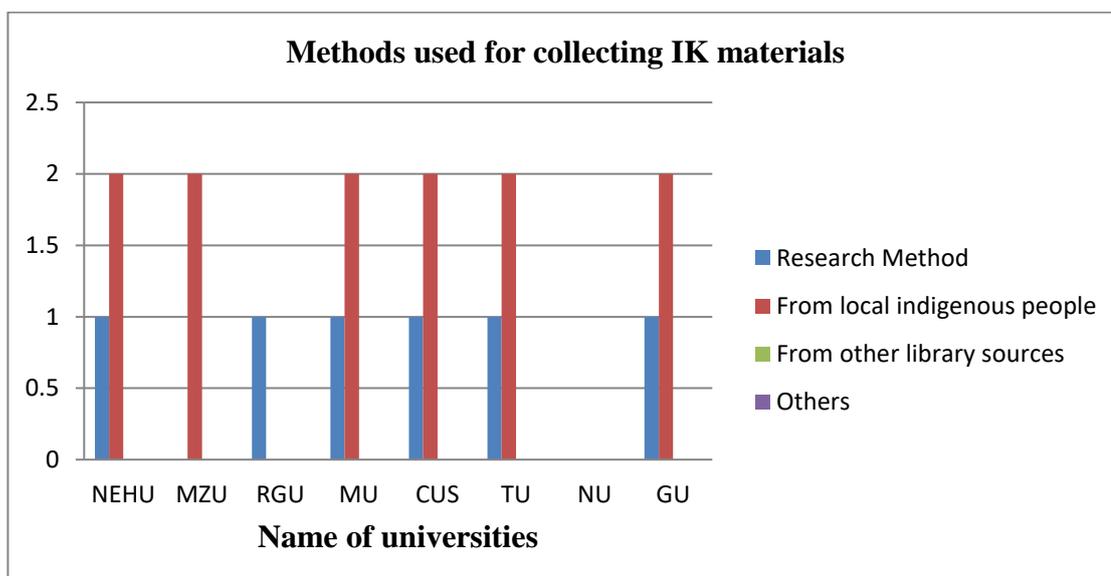
The data analysed above indicates the types of indigenous knowledge collected by libraries under study. However the collection development policy of the libraries differs. Mizoram universities for example collected indigenous knowledge of the Mizos in separate bulk and have a special attention with the storing and accessioning of the local knowledge. But in most cases libraries under study collected and stored in one manner and different types of indigenous knowledge collected are stored in one place.

Chart 2: Methods for selection of indigenous knowledge by libraries under study.



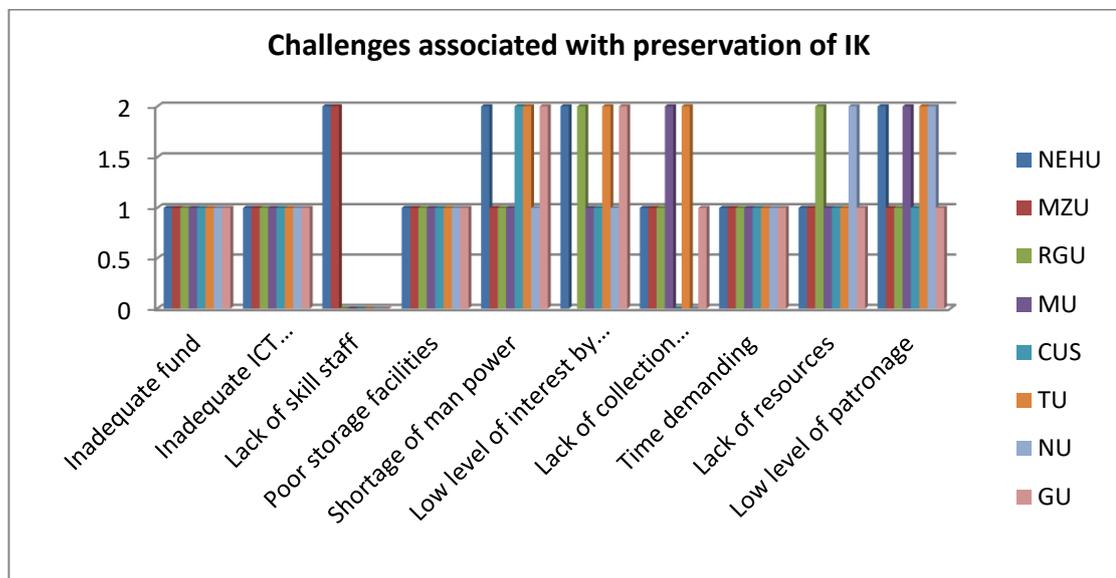
The above table indicates methods adopted for selection of indigenous knowledge materials for the libraries. It can be mentioned that each libraries has different policies of collection development. However, the above data analysis clearly shows that methods for selecting indigenous materials for libraries under study tend to follow similar policies for acquiring indigenous knowledge materials. Libraries selected indigenous knowledge materials from both users' and library's perspectives but much emphasis is given on users perspectives of selection.

Chart 3: Methods used for collecting indigenous knowledge materials by libraries under study.



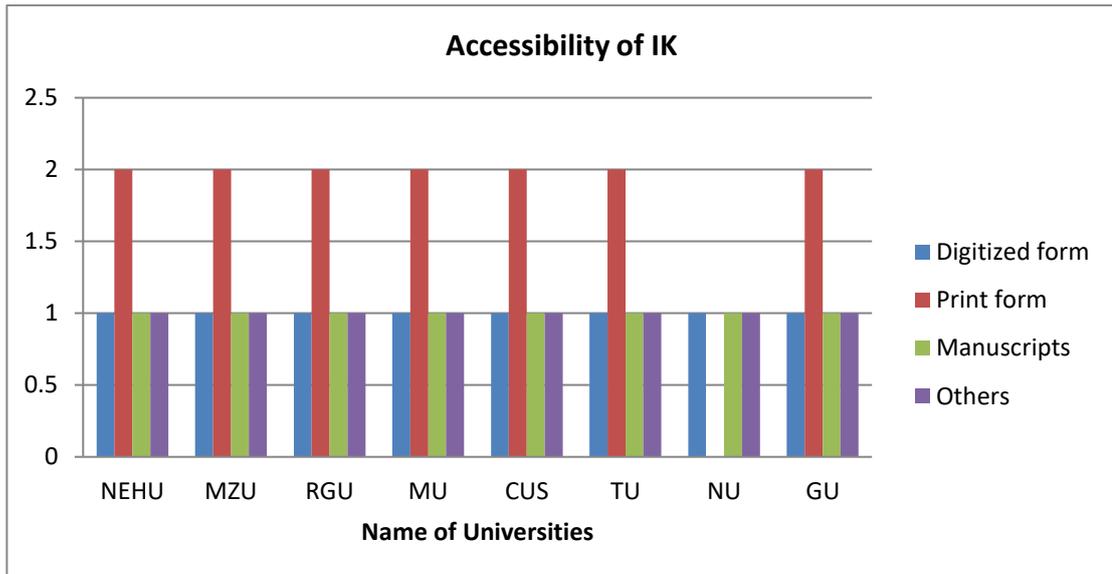
According to the above table, the main method for collecting indigenous knowledge materials is obtaining from the local indigenous people. The libraries in collaboration with the stakeholders acquire IK materials and make them available for the users to access them in print or digitized form. However, unlike other libraries, Mizoram university library procures indigenous knowledge materials proposed by the concerned departments after the approval of the book selection committee.

Chart 4: Challenges associated with preservation and management of IK in libraries under study:



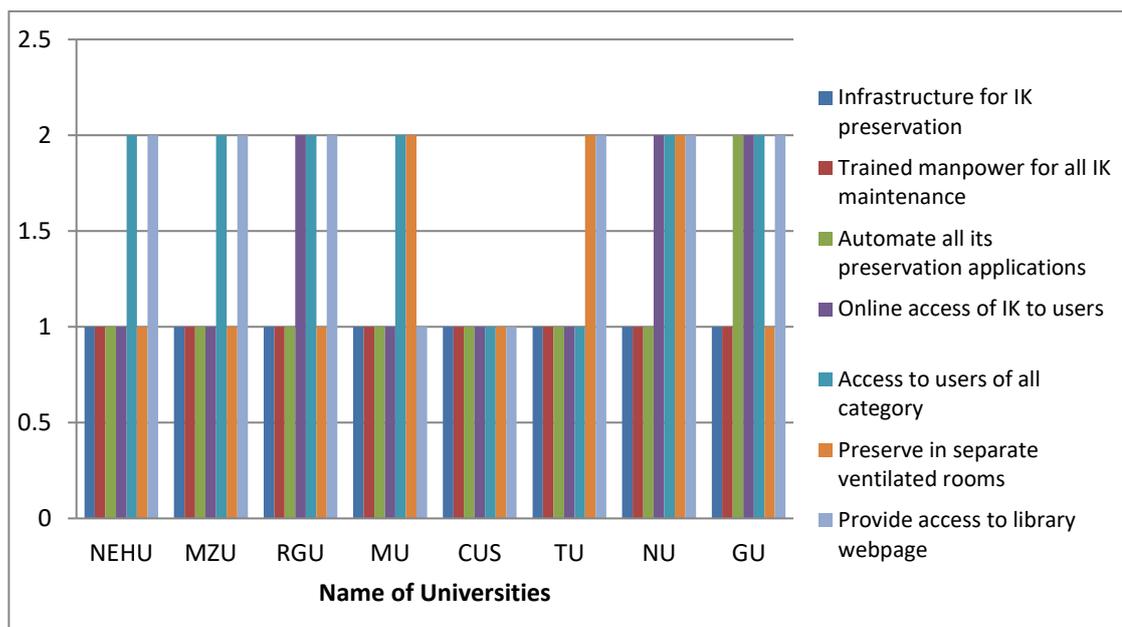
Observation from the above table shows the major challenges face by libraries with regards to management of indigenous knowledge are inadequate fund, inadequate ICT infrastructure, poor storage facilities, time demanding, lack of resources etc. This could mean that much attention is needed for conservation and maintenance of indigenous knowledge in the libraries. However, initiation of collection and dissemination of indigenous knowledge depends on the library personnel which required lots of inputs and policies in collaboration with the local practitioners.

Chart 5: Methods for making IK accessible.



Majority of the respondents reported that collection of indigenous knowledge in their respective libraries can be accessed in print form. It is found from the study that libraries under study are equipped with automated machine for better functioning of the library but, it is sad to learn that processing or digitizing of indigenous collection is still not carried out systematically. As of now, the libraries collect and store all the manuscripts and knowledge in the same condition it is received. There are no policies for digitizing and making IK available for the users of libraries to access in digitized form. Policies are made to collect and store indigenous knowledge, however making it accessible in digitized form is still a challenge.

Chart 5: Librarians' attitude towards management of IK in the libraries.



All respondents identified the need and importance of IK infrastructures required for the proper management of indigenous knowledge in the libraries. Librarians of all the libraries under study accepted and are all aware of the importance of indigenous knowledge preservation in the library. They all agree on the point of giving special attentions to the indigenous knowledge which is on the verge of extinction.

4.2 Discussion of findings:

The study reveals that indigenous knowledge collected at the libraries under study were on; indigenous art, indigenous cultural knowledge, indigenous agricultural knowledge, indigenous ritual knowledge, indigenous environmental knowledge etc. which mostly follow similar policies for acquiring the materials. It is also evident that libraries selected indigenous knowledge materials from both users and library perspectives of relevance. It is also established from the finding that libraries collected indigenous knowledge materials mostly from the local indigenous practitioners, which are kept available mostly in print form. One of

the respondent from Mizoram university library stated that indigenous knowledge materials for their library are procured by proposal from concerned departments after the approval from book selection committee. In view of the study, it shows that libraries and library personnel under study are on the course of setting a new dimension for protecting and conserving vulnerable knowledge such as local indigenous knowledge. This is in support of Alex Berne (2005) who states that for library, archives and information professionals, knowledge is the stuff in which we deal. We have a responsibility to curate it and ensure its transmission through good times and bad to those who may need or appreciate it in other periods and places. He further argued that his is a deeply felt commitment which goes to the core of our being as professionals. The commitment defines a professional identity which determines the attitudes and behaviours of information professionals. It guides our professional practice and the ways in which we respond to the duties of preservation and transmission of knowledge and the needs of our clients.

The study also found out that there are challenges associated with preservation and dissemination of indigenous knowledge in the libraries, most of which are in the area of inadequate fund and ICT infrastructures, poor storage facilities, man power shortage, time demanding etc. such issues indeed is a challenge where it require the working professional's to give more efforts. This supports the findings of Anyira, Onoroide & Nwabueze (2010) where they proclaimed that efforts should be made to collect and package IK and make it available on the Internet. Efforts should also be made to persuade traditional institutions and resource persons in indigenous communities to share IK with libraries for proper preservation and accessibility.

The findings also reveal the interesting nature of library personnel towards management of indigenous knowledge in the libraries. It is clear from the study that all working personnel are aware of the importance of indigenous knowledge preservation in the library. They all agreed

to the points of infrastructure needs for IK preservation, trained manpower, to automate all its preservation applications, provide online access to users, provide access to library webpage etc. which follow the findings of Msuya (2007) who affirmed that there has to be a deliberate efforts to conduct researches in the area of indigenous knowledge. This role can best be undertaken by university and appropriate research institute. Areas can include disclosing, recording and preserving indigenous knowledge.

Conclusion and recommendations:

North East India is one of the regions in India and the world that are rich in the number and variety of indigenous knowledge. From the study, it is evident that while efforts are being made by University libraries in North East India to preserve indigenous knowledge, some even digitally, yet indigenous knowledge is not effectively managed in the libraries under study. The study also found that access to IK collections is mainly through print format and that there is no policy on digitizing and archiving indigenous collections in the libraries. Library and information professional have much learning to do, to appropriately manage IK in library and information centres.

It is important for the library professionals to prioritize management of indigenous knowledge. Policies should be framed for collecting and preserving indigenous knowledge, which is in danger of extinction. The libraries, in collaboration with the local practitioners, should collect and store every aspect of IK in the libraries and make them available for users to access in print as well as in digitized form. Efforts should be made to collect and package IK and make it available on the Internet as well. Government and corporate organizations should collaborate with libraries by providing funds for preservation of and accessibility to IK. Copyright issues should be properly sorted out before embarking on any collaboration agreement (Anyira, Onoroide & Nwabeze, 2010). Documentation of indigenous knowledge

does not end with collecting and packaging it, it should be preserved and made accessible using the latest technologies.

References:

Abdulmumin, I, Bashorun, M.T and Omopupa, K.T. (2012). Libraries and Preservation of Indigenous Knowledge in Developing Countries: The Nigeria Experience. Library and Information Science Book. IGI Global Disseminator of Knowledge. USA. Accessed on 25 November, 2014.

Agrawal, A. (2004). Indigenous and scientific knowledge. *IK Monitor*, 3(28-Apr-2008), 7–8. <https://doi.org/10.1111/j.1467-7660.1995.tb00560.x>

Akesbejo-Samsons, Y. (2009). Promoting local and indigenous knowledge in enhancing adaptive capacities under extreme events in Nigeria. *IOP Conference Series: Earth and Environmental Science*, 6(41), 412014. <https://doi.org/10.1088/1755-1307/6/1/412014>

Akullo, D., Kanzikwera, R., & Birungi, P. (2007). Indigenous Knowledge in Agriculture: a case study of the challenges in sharing knowledge of past generations in a globalized context in Uganda. *Durban, South Africa*. ..., 1–14. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.151.1228&rep=rep1&type=pdf%5Cnhttp://www.ifla.org/iv/ifla73/index.htm%0A>

Anyira, I., Onoriode, O., & Nwabueze, A. (2010). The Role of Libraries in the Preservation and Accessibility of Indigenous Knowledge in the Niger Delta Region of Nigeria. *Indigenous Knowledge in the Niger Delta Region of Nigeria. Library Philosophy and Practice*, 387, 1–9.

Atte, O. D. (1989). Indigenous knowledge systems : implications for agriculture and international development. *Studies in Technology and Social Change*, (No. 20), 186.

Retrieved from <https://www.cabdirect.org/cabdirect/abstract/19941800595>

Bisong, F., & Andrew-Essien, E. (2010). Indigenous Knowledge Systems for Promoting Community Conservation Education in a Nigerian Protected Area. *International Journal of Biology*, 2(2), 149–157. <https://doi.org/10.5539/ijb.v2n2p149>

D,Anderson;R, G. (Ed.). (1987). *Conservation in Africa: People, policies and practice*. Cambridge University Press.

Lalonde, A. (1991). No Title.

Libraries, A., & Interest, S. (2011). Meeting: 78 —, (2005), 1–12.

Lor, P. (2004). Storehouses of knowledge? The role of libraries in preserving and promoting indigenous knowledge. *Indinga-African Journal of Indigenous Knowledge Systems*, 3(1), 45–56.

Mhlongo, M., & Ngulube, P. (2019). Resource provision and access to indigenous knowledge in public libraries in South Africa. *Information Development*. <https://doi.org/10.1177/0266666919841095>

Nakata, M., Byrne, A., Nakata, V., & Gardiner, G. (2005). Indigenous Knowledge, the Library and Information Service Sector, and Protocols. *Australian Academic & Research Libraries*, 36(2), 7–21. <https://doi.org/10.1080/00048623.2005.10721244>

Okoye, J. S. I., & Oni, K. (2017). Promotion of Indigenous Food Preservation and Processing Knowledge and the Challenge of Food Security in Africa. *Journal of Food Security*, 5(3), 75–87. <https://doi.org/10.12691/jfs-5-3-3>

Schafer, J., Ezirim, M., Gamurorwa, A., Ntsonyane, P., Phiri, M., Sagnia, J., ... Bairu, W. W. (2004). Exploring and Promoting the Value of Indigenous Knowledge in Early

Childhood Development in Africa. *International Journal of Educational Policy, Research, and Practice: Reconceptualizing Childhood Studies*, 5(3), 61–80.

Stubbings, B. J. J. (1982). Indigenous knowledge systems and development. Edited by David W. Brokensha, D. M. Warren and Oswald Werner University Press of America, 1980, 466 pp. *Public Administration and Development*, 2(1), 85–85.
<https://doi.org/10.1002/pad.4230020118>

Tabuti, J.R.S.(2006). Traditional knowledge in Bulamogi County - Uganda: Importance to sustainable livelihoods. In: Millar, D., Kendie, S.B., Apusigah, A.A., Haverkort, B. (Eds.), *African Knowledge and Sciences: Understanding and supporting the ways of knowing in Sub-Saharan Africa*. CTA, Bolgatanga U/R Region, Ghana, pp. 98-105.

Tabuti, J.R.S., Ticktin, T., Arinaitwe, M.Z., Muwanika, V.B. (2009). Community attitudes and preferences towards woody species: implications for conservation in Nawaikoke, Uganda. *Oryx* 43, 393-402.

Tabuti, J. R. S., & Van Damme, P. (2012). Review of indigenous knowledge in Uganda: implications for its promotion. *Afrika Focus*, 25(1), 29–38.
<https://doi.org/10.21825/af.v25i1.4961>

Warren, D. M. (1991). *Using indigenous knowledge in agricultural development*. World Bank discussion papers (USA). World Bank. Retrieved from <http://agris.fao.org/agris-search/search.do?recordID=US9154585>

Willett, A. B. J. (1993). Indigenous Knowledge and Its Implication for Agricultural Development and Agricultural Education: a Case Study of the Vedic Tradition in Nepal. *Education*, 343.

