

Management of Indigenous Knowledge as a Catalyst towards Improved Information Accessibility to Local Communities: A Literature Review

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ABSTRACT: This paper reviews the existing literature on how the management of indigenous knowledge could lead to its effective utilization. Indigenous knowledge is different from other types of knowledge. It could be an important tool to ensure the sustainability of societal development of local communities.

I. Introduction

Knowledge is “the fact or condition of knowing something with familiarity gained through experience or association” (*Merriam-Webster Dictionary*) or “awareness, consciousness, or familiarity gained by experience or learning” (*Collins English Dictionary*).

Nonaka (2006) asserted that knowledge is “a dynamic human process of justifying personal belief towards the truth”. He opined that there are two types of knowledge, namely, explicit and tacit knowledge. Explicit knowledge can be express in formal and systematic language and shared in the form of data, scientific formulae, specifications manuals and others while tacit knowledge on the other hand is “highly personal and hard to formalize” as it is “deeply rooted in action, procedures, routines, commitments, ideals, value and emotions” (Mladkoa, 2011, p. 248).

Today, there is growing appreciation of the value of knowledge not only by those who depend on it in their daily lives but also by many industries. Barnhardt and Kawagley (2005) affirmed that

“Indigenous people throughout the world have sustained their unique world views and associated knowledge systems for millennia, even while undergoing major social upheavals as a result of transformative forces beyond their control. Many of the core values, beliefs and practices associated with those worldviews have survived and are beginning to be recognized as having an adaptive integrity that is as valid for today’s generations as it was for generations past”.

They concluded that “the depth of indigenous knowledge rooted in the long inhabitation of a particular place offers lessons that can benefit everyone, from educator to scientist, as we search for a more satisfying and sustainable way to live on this planet”.

Prior to the advent of technology, people relied heavily on indigenous knowledge to regulate their activities, which in turn, enabled them to live in harmony among themselves as well as within their environments. Indigenous knowledge as practiced then covers all forms of knowledge, such as technologies, know-hows, skills, practices, and beliefs. This knowledge is transmitted from generation to generation.

Indigenous knowledge has been noted to make a significant contribution to sustainable development of local communities, as it is seen as a set of perceptions, information and behavior that guide local community members to use the land and natural resources. The goal of managing indigenous knowledge is to provide the right information to the right people at the right time.

II. Indigenous Knowledge

Indigenous knowledge is “local knowledge that is unique to every culture and society” (World Bank, 1998).

Masango (2010) defined indigenous knowledge as “the totality of all knowledge and practices established on past experiences and observations that is held and used by people”.

Gorjestani (2000) observed that

Indigenous knowledge (IK) is used at the local level by communities as the basis for decisions pertaining to food security, human and animal health, education, natural resources management, and other vital activities. IK is a key element of the social capital of the poor and constitutes their main asset in their efforts to gain control of their own lives. For these reasons, the potential contribution of IK to locally managed, sustainable

and cost-effective survival strategies should be promoted in the development process. To facilitate the integration of IK into operations, the African department of the World Bank launched the Indigenous Knowledge for Development Program in 1998. This paper reflects on the Program's experiences over the last three years and the steps that could be taken to further assist communities and governments to integrate indigenous knowledge into the development process. (p. 1)

Ascher (2002) opined that "Indigenous people have had their own ways of looking at and relating to the world, the universe, and to each other. Their traditional education processes were carefully constructed around observing natural processes, adapting modes of survival, obtaining sustenance from the plant and animal world, and using natural materials to make their tools and implements" (as cited by Barnhardt and Kawagley, 2005).

Cajete (2000) believed that indigenous knowledge was made understandable through "demonstration and observation accompanied by thoughtful stories in which the lessons were imbedded". He conclude that indigenous knowledge "is not static or an unchanging artifact of a former life way, but rather it has been adapting to the contemporary world since contact with others began and thus, it will continue to change".

The World Bank (1998?) stated that

Today, many indigenous knowledge systems are at risk of becoming extinct because of rapidly changing natural environments and fast pacing economic, political, and cultural changes on a global scale. Practices vanish, as they become inappropriate for new challenges or because they adapt too slowly. However, many practices disappear only because of the intrusion of foreign technologies or development concepts that promise short-term gains or solutions to problems without being capable of sustaining them. The tragedy of the impending disappearance of indigenous knowledge 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.

The Global Forum of Indigenous People and the Information Society declared that

Information and Communication Technology (ICT) should be used to support and encourage cultural diversity and to preserve and promote indigenous languages, distinct identities and traditional knowledge of

Indigenous peoples, nations and tribes in a manner which they determine best advances these goals. (United Nations, 2003)

That is why Agea, Lugangwa, Obua, and Kambugu (2008) warned that “failure to maintain adequate records and preserve indigenous knowledge meant that much of it is being lost.”

III. The Role of Information Professionals

Since indigenous knowledge is “an important asset with regard to the social capital of local people and constitutes the main resource for their livelihoods” (Lwoga, Ngulube, and Stilwell, 2011), it is imperative for information professionals to preserve and manage indigenous knowledge and provide guidance and access to the populace in a way that best suit their needs.

Chisenga (2002) observed that “Africa produces a great deal of information and knowledge relevant to and useful for its environment”. And he believed that there is “the need for information from Africa to be harnessed, repackaged and added to the global information infrastructure”.

Lwoga (2011) believed that “lack of a cohesive approach for managing knowledge suppresses the efforts of the poor to take advantage of their innovations and skills to improve their activities”.

The need for a community to safeguard its indigenous knowledge calls for the acceptance of such knowledge by successive generations. However, such acceptance, as Kurin (2004) put it, “must be genuine and cannot be derived through such coercive forms as legally requiring the sons and daughters who practice a tradition to continue in their parents footsteps”.

In its *Statement on Indigenous Traditional Knowledge*, IFLA (2008) recommended that libraries

1. Implement programs to collect, preserve and disseminate indigenous and local traditional knowledge resources.
2. Make available and promote information resources which support research and learning about indigenous and local traditional knowledge, its importance and use in modern society.
3. Publicize the value, contribution, and importance of indigenous and local traditional knowledge to both non-indigenous and indigenous peoples.

4. Involve Elders and communities in the production of resources and teaching children to understand and appreciate the traditional knowledge background and sense identity that is associated with indigenous knowledge systems.
5. Urge governments to ensure the exemption from value added taxes of books and other recording media on indigenous and local traditional knowledge.
6. Encourage the recognition of principles of intellectual property to ensure the proper protection and use of indigenous traditional knowledge and products derived from it.

IV. Role of ICT in Indigenous Knowledge Management

Since ancient time, vital information on health, child rearing, natural resources management, etc. are often encoded in unique forms such as proverbs, myths, rituals, and ceremonies. With the advent of technology, it is imperative to look for ways of processing indigenous knowledge in the same way as scientific information.

Information and Communications Technology (ICT) plays major roles in improving the availability of indigenous knowledge systems and enhancing its blending with the modern scientific and technical knowledge.

According to Adam (2012), ICT can be used to:

- Capture, store and disseminate indigenous knowledge so that traditional knowledge is preserved for the future generation
- Promote cost-effective dissemination of indigenous knowledge
- Create easily accessible indigenous knowledge information systems
- Promote integration of indigenous knowledge into formal and non-formal training and education
- Provide a platform for advocating for improved benefit from IK systems of the poor

In fact, proper application of ICT is essential to stimulate the flow of indigenous knowledge and the incorporation of modern scientific and technological understandings to traditional knowledge. Scientific weather forecasts may be more credible to a local community, if ways are found to integrate them with indigenous knowledge that local people have relied on for generations.

V. Challenges Associated with Indigenous Knowledge Management

One of the major problems associated with indigenous knowledge management is what Barnhardt and Kawagley (2005) identified as “lack of indigenous people with advanced indigenous expertise and western research experience to bring balance to the indigenous knowledge enterprise”.

Indigenous knowledge belongs to tacit knowledge category; it is knowledge mainly held in people’s brain. Hence, it is difficult to record, transfer, and disseminate. Moreover, indigenous people are reluctant to share their knowledge. No adequate intellectual property rights are in place. And indigenous knowledge is often regarded as pseudo-science or anti-science.

1. Information Accessibility

Afolabi (2003) argued that “information is indispensably an ingredient for social, economic, industrial, political and technological advancement as it is apparent in every facet of human endeavors that no meaningful and enduring development can be achieved without it”.

Sturges and Neil (1990) reported that “rural inhabitants of Africa are increasingly appreciating the usefulness of relevant information to their development like their urban counterparts, due to convenient information transfer mechanisms such as associations, traditional institutions, age grades, community leaders and others” (p. 5).

Opeke (2000) believed that “the world has entered an era where the source of wealth and power is increasingly from information and human mental creativity as compared with physical resources”.

2. Intellectual Property

Ownership is the “ultimate and exclusive right conferred by a lawful claim or title, and subject to certain restrictions to enjoy, occupy, possess, rent, sell, use, give away, or even destroy an item of property” (BusinessDictionary.com). In other words, ownership involves determining who has rights and duties over certain property.

Schnarch (2004) referred ownership to “the relationship of a community to its knowledge or information”. The principle of ownership, according to him, states that “a community or group owns information collectively in the same way that an individual owns their personal information. Hence, gathering or managing of knowledge through an institution

that is accountable to the group is a mechanism through which ownership may be asserted” (Schnarch, 2004).

According to Democratic Alliance (2011), “Indigenous knowledge seldom has an identifiable author; it is passed down from generation to generation. It is often not recorded, or even impossible to record, existing in the minds of a community. And it needs to be protected in perpetuity: protections should exist as long as the community exists.”

However, Sahai (2002) warned that “diverse forms of indigenous knowledge have been appropriated by researchers and commercial enterprises, without any compensation to the knowledge creators or possessors”.

In view of this, Simeone (2004) suggested that “indigenous knowledge needs to be protected because the creators or possessors have the right to receive a fair return on what the communities have developed”.

Protecting indigenous knowledge will also facilitate continuity so that such knowledge could continue to be passed from generation to generation.

All these put together calls for the need to enthrone the Intellectual Property Bill to protect indigenous knowledge so that such communities could benefit from the financial support from the developed countries.

3. Motivating Indigenous People

Indigenous people’s right to self-determination must be ensured. In other words, they have the right to freely determine their political status and freely pursue their economic, social, and cultural development.

The Indigenous people must enjoy environmental security in relation to their hunting, fishing and other activities.

Health is wealth, as a popular saying goes. A perfect health condition of the indigenous people must be guaranteed.

Equal access to the relevant local knowledge for all stakeholders within the community must be allowed.

Indigenous people will continue to be proactive once they have protection over the ownership of their knowledge and at the same time been adequately compensated for the released knowledge.

VI. Conclusion

“Indigenous knowledge is a profound, detailed and shared beliefs and rules with regards to the physical resource, social norms, health, ecosystem, culture, livelihood of the people who interact with environment both in rural and urban settings. It has been the basis for local level decision making in agriculture, health care, food preparation, education, natural resource management, and a host of other activities” (Warren, 1991, p. 127, as cited by Adam, 2012). “It represents an important component of global knowledge” (World Bank, 1998, as cited by Adam, 2012).

To achieve all these, it is pertinent to identify some policy issues which will act as principles or rule to guide decisions towards achieving rationale outcomes.

Indigenous knowledge should urgently be documented to avoid the loss of vital information as the elderly custodians of knowledge disappear from the scene.

Laws to safeguard intellectual property rights relating to indigenous knowledge should be enacted immediately.

There should be a memorandum of understanding between owners of indigenous knowledge and the Western world, especially on the community knowledge that has commercial value.

Indigenous Knowledge should be incorporated into national policy and development documents where issues bordering on the use, preservation, and distribution need to be clearly stated.

Efforts should be made to convert indigenous knowledge into electronic storage so as to increase the life span of such knowledge.

Those wishing to harness Indigenous knowledge must be ready to compensate providers of such knowledge.

Indigenous knowledge must be integrated with modern knowledge and taught in community schools so as to get it popularized among the public.

In addition, there is urgent need for information professionals to assist in re-packaging indigenous knowledge and making it available to both literate and illiterate people.

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