CHAPTER 15

East Africa and Indigenous Knowledge: Its Nature, Contents, Aims, Contemporary Structures, and Vitality

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Introduction

For a long time, Western scholars have believed Africa is so dark that nothing good can come from it. This image is changing rapidly because Western science has discovered that local communities have developed useful and sophisticated knowledge systems over thousands of years Boulding (2000). This chapter is about East Africa and Indigenous knowledge (IK). The region is composed of five states (Uganda, Kenya, Tanzania, Rwanda, and Burundi) with over one hundred ethnic groupings. Due to ethnic diversity, only few ethnic groups in Uganda, Kenya, and Tanzania have been referred to in this study. Uganda and Kenya were colonized by Britain, Tanzania by Germany, and later by Britain in 1946 as Trust Territory under the United Nations. Therefore, this region under study as it is elsewhere in Africa bears scars of colonialism and imperialism in all aspects of life. However, the focus of this chapter is on Indigenous education and knowledge.

The aims of this chapter are to explore the nature/characteristics of Indigenous knowledge of the people; examine contents; discuss aims of imparting IK through generations; analyze its contemporary structures; discuss vitality amidst modern challenges; and make some recommendations.

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It is hoped this chapter will provide new insights and stimulate new debates about the place of IK and its enduring existence within the hostile environment of formal education and other policies.

Contextual Issues: Toward Definition of Indigenous Knowledge

Various scholars have attempted to define what African Indigenous knowledge is. Amanda, (2008) and another thinker (Thaman 2001) writing from different backgrounds, and admitting that Indigenous knowledge (IK) is difficult to define due to its great variations perceive it as referring to a complete body of knowledge, know-how, and practices maintained and developed by peoples generally in rural areas who have historically interacted for a long time with the natural environment. In other words, IK is local, holistic, and belonging to unwritten tradition—an outcome of interaction with nature in a common territory. Yoong and Slade (2014) understand IK as a unique cumulative body of knowledge generated overtime and possessed by a people belonging to a particular geographic area to enable them to benefit from natural resources.

There are as many definitions as there are scholars, but there is one thing in common among many of them. They all perceive IK basing on what can be called, "The Bat Hypothesis" of Indigenous Knowledge" (the term is coined by the author). A bat does not see the whole universe but only the landscape and its contents. It sees the horizon only in passing. Even when it is resting its eyes look only toward the ground below. IK is not limited to interaction with the social and natural environment as it is with the flying mammal.

In this chapter, a panoramic definition is suggested. It states that, "Indigenous Knowledge is creative form of knowing and awareness of the cosmos by natives over time. Intellectual facts are acquired and imparted, practical skills instilled and used, behavior and attitudes shaped and applied within the terrestrial, celestial, visible and invisible realities of their life experiences." Intellectual knowledge is transmitted orally, practical skills passed on by chain activity across generations, and value systems/attitudes perpetually lived in a chain from earliest generations to posterity. This definition embraces the ontological and teleological aspects of African existence as fundamentals of being. Imafidon Elvis (2012) is right in noting that African concept of reality is holistic as it interlocks both material and immaterial realities. So knowing cannot be fixed only on the surface of the material earth. African universe is religious and onto-theological Maduabuchi (2010).

Epistemological Issues

What are the sources of Indigenous knowledge? How do Indigenous East Africans come to know what they claim to know? To answer this inquiry, I would like to use the concepts of one writer to give response. Lajul (2014) points out that in Africa IK is acquired through the senses, the intellect,

rational processes, empirical sources, and mystical powers associated with divination. However, Lajul downgrades IK to three types of knowledge, namely sense, intellectual, and mystical—probably without putting emphasis on the sources. Owuor (2007) points out that African sources of knowing (especially among Kenyan communities) are as diverse as the forty-two Indigenous communities. Indeed, the sources are universally diverse. Using the experiences of three societies in East Africa, namely the *Jopadhola*,[1] *Baganda*,[2] and *Kikuyu*,[3] this chapter answers these epistemological questions. Distinctively, there are probably four sources of IK. There are authoritative sources; rational sources; practical/experimentations sources; and divine sources of knowledge. However, the sources are not clear-cut but integrated and complimentary.

Authoritative sources of IK have sages/elders experts and specialists and herbalists. These are professors who command powers of factual knowledge and skills. A sage is someone regarded as wise, experienced, and full of knowledge capable of guiding society. Among *Jopadhola* and *Baganda* of Uganda, elders (grandparents, chiefs) fall in this category. They tell stories, myths, and legends and mentor the young with power and pomp of the powerful persons.

The rational sources of knowledge depend on the reasoning, critical thinking process, and speculation. Among the Baganda, a bright person who is capable of intricate reasoning is called *Mugezi Ng'Enkusu* (meaning as clever as a Parrot). In Buganda, parrots are believed to speak complicated English. The Jopadhola call such a person *Kudho* (a metaphor that means, a thorn or as sharp as a thorn). The African uses earthly symbols to convey sophisticated ideas about life. This is metaphysics from where knowledge is generated. This is grounded on the belief that everything that exists has life force; but events are determined by the wills of spiritual beings Kanu (2014).

Empirical sources of knowledge give knowledge through trial and error, trainings and personal search for knowledge in the natural setting. Mawere (2015) confirms this view when he says IK is generated by societal members through trial and errors as they seek solutions to their daily problems. Hanson (2010) gives evidence that in Bunyoro there were surprising advances in science and technology. Cesarean births were performed on pregnant mothers, crops, and seeds were crossbred to limit scientific disasters and generated knowledge through observations and experimentations. Throughout life the African lives as a practical scientist erring without fear; studying and interpreting terrestrial and celestial forces without favor because learning is a lifelong process.

Divine/Revelation sources have to do with divination, intuition, dreams, visions, and direct experience with Supreme Being, apparitions of departed ancestors all of which happen in mystical ways. Nearly every source of knowledge—whether it is cognitive, rational, practical, or normative—comes from the divine and close agents. Some are silent while a few are very loud and affect generations to come. For example, in the times before colonialism, two Seers one in Nandi land (Koitalel Arap Samoei) and another in Kikuyu

(Mugo wa Kibiro) foresaw and warned their people about the coming of foreigners. Jomo Kenyatta (1978) acknowledges this when he narrates that in the period before 1890s a medicine man called *Mugo wa Kibiro* told the Kikuyu that strangers would come to Kikuyuland from the big waters. The color of their body would resemble a light-colored frog (*Kiengere*) which lives in water. Their clothes would be like wings of butterflies and would carry sticks that could spit fire (the gun), and they would travel in iron snakes (trains) with as many legs as *Munyongoro* (centipedes). It happened as revealed to the prophet.

The Nature of Indigenous Knowledge

IK originates and finds meaning within culture, is experiential and relational. The spirit of African worldview includes wholeness, community, and harmony Owusu-Ansah and Mji (2013). This is true but it should also be noted that IK is not only relational but also relative. For example, in East Africa, the Jopadhola, Kikuyu, Baganda, and Chagga all have concept of God. Kikuyu name for Go is *Ngai*[4] but He is God of the mountains while Baganda and Jopadhola conceive God as of the skies. The idea of IK knitting community into wholeness is relative because wholeness here refers to specific community. For example, the *Turkana*[5] and *Maasai*[6] (both of Kenya) believe in raiding and bringing back cattle from those who own them believing it is their birthright to own cattle. So IK operates and finds meaning in context of cultural relativity. Man finds meaning in life within the sociological structure of being.

Methodology for acquisition of IK is practical. There is direct participation by learners as they listen and reason about what they see and do, including oral literature. Zulu (2006) observes that African learners participate actively in ceremonies, rituals, recitation, and demonstrations. They sport, dance, sing, reason about stories, epic, poetry presented, take part in puzzles, tongue-twisters, riddles, and even in plant biology activities. What is true about the Baganda and Jopadhola and many other ethnic groups in East Africa is that whenever they have taken part in an oral and practical learning sessions during day or evenings they apply immediately. No learning is theoretical and meaningless. From birth a child learns to value elders as teachers who teach them practical knowledge, Semali Ladilaus and Stambach Amy (1997). Whatever is learned is applied within ontological principles of community and individual living, survival, and duty.

IK is all-embracing and holistic. Segregation or compartmentalization does not exist. The African understands life as one entity. A man who takes youth to the bush to hunt with him teaches the youth a lot of integrated knowledge—having learned both practically and theoretically. Types of plants, fruits, insects, terrain, and behavior of games hunted, how to handle and throw weapons as well as teamwork. There are disciplines as biology, botany,

forestry, geography, ecology, physics, chemistry, administration, psychology, ethics, sociology, biodiversity, zoology, and many others (natural and social sciences) learned and applied in one hunting trip. Yet today IK has become fragmented and specialized as scientists and humanitarians pick at the bits and pieces that fit with their interests and disciplines.

Another characteristic of IK is that it is functional, pragmatic, and dynamic. It is founded on the educational philosophy of productivity and functionalism Okoro (2010). Akullo (2007) reiterates the same point when she points out that IK is dynamic and changes through creativity and innovativeness especially when it comes in contact with foreign forms of knowledge. IK has been constructed, deconstructed, and reconstructed over time to remain relevant in solving effectively the needs, challenges, problems, and aspirations of the community in question. Africans do not live theoretically but practically. It is not enough to hear animal stories but one must know how and where they live. Names of trees are learned but they have to know how to exploit them for herbs and other uses as well Lajul (2014).

Whatever is cherished as knowledge is of great value to the community. IK is knowledge that can be tested and proved to cohere or correspond with reality. The contrary is not an African perception or praxis. Knowledge is not gained for fun or pride. The question is, "does it work in context of the needs of the community?" For example, Jopadhola, Baganda, and some other ethnic groups in East Africa used to hold annual festivals of *Kigwo* (wrestling competition) and *Abilo* (stick fighting). These were not simply for leisure and fun. They trained the population to acquire self-defense skills and knowledge, resilience, endurance, and combat technics needed for survival in hostile environments. Meanwhile *Maasai* youth are taught behavior of predators such as lions, leopards, and hyenas and how to track and kill them to defend themselves and herds. The perception of Malinowski (1936) that the Maasai in his conservative material culture still clings to his tribal ways and remains at heart a gentle-man robber, cattle lifter, and warrior is gross misperception.

Teachers that impart IK are several, namely mother, father, grandmother, uncle, aunt, peers, and members of the extended family; depending on stage of growth and development, each teacher may emphasize different aspects in life White (1996). In all cases, examinations are not formally given. Apprentices, experts in various fields, and the elders are professors who design the curricular based on the needs, pressure, and aspirations of the people. Elders are accepted as sages of knowledge because the African worldview of personhood is that the more a person lives on earth the more he becomes excellent in wisdom, intelligence, and ethical values. It is believed the sages can intertwine in close relationship with young learners mainly for their education programs (Nafukho 2006). This does not mean that contents of the curriculum are old and static. It is progressive because according to Owuor (2007) while sharing the ideas of Wane (2007) in the process of learning new knowledge is created. There is interactive learning from the community,

environment, and the cosmos that bear unwritten contents of all forms of knowledge.

IK is deeply rooted in the community of the people who enjoy it having been generated from time immemorial Yoong and Slade (2014). The form of Indigenous knowledge is deeply rooted in the sociological phenomena of blood, soil, and community. That is the reason IK and education system varies from one group to another. What peasantry people emphasize is quite different from the curriculum of pastoral communities.

It is universal, compulsory, and democratic. Acquisition of IK is a birthright. Once born into community, a child begins to enjoy learning and teaching free of charge. Parents and community are teachers and natural environment the laboratory. Some aspects of IK are released to the learners according to age and status in the family. For example, knowledge about sex is taught to the teenage girls after puberty by *Senga* (meaning Aunt or woman expert in marriage issues among Baganda) to prepare them for marriage Namulondo and Perez (2011). They acquire knowledge about ethical and practical aspects of sex. The ages below puberty are restricted and the young learn through accidents, peers, and trial and error. IK is democratic because all categories of members of the community have right to knowledge for personal and community welfare and harmony. However, some kinds of knowledge are censored from public. Herbal medicines and secret knowledge of diviners/seers are not for all members of the community.

Curriculum Content

Although IK is denied by Eurocentric thinkers as unsystematic and opposite to scientific knowledge, Indigenous knowledge was and still exists Battiste (2002). The subject matter and methodology for imparting are not abstract as Levi-Strauss (1962) claims. Yoong and Slade (2014) who attempt to categorize contents of IK curriculum into two, namely explicit and tacit contents, need to re-examine their perceptions.

Whatever the argument, for the purpose of this work contents of IK are arranged into three broad groups, namely practical, intellectual, and aesthetic/normative (values and beliefs) knowledge. It is systemic covering what can be observed and what can be thought Battiste (2002). However, in the process of engaging with the learner, there is no distinction between the practical, intellective, and normative. For example, when a Japadhola tells a young person *Koth goyo widero* literally translated as "the rain is pattering on the head of granary," it does not mean the real rain is pouring on the granary cover. In abstract way through wise saying the person is being told that he/she is poorly dressed/seated and the vital organs are exposed to public eyes (rain). This is an ordinary norm being imparted to a member of community for practical and immediate application. To understand it he/she has to reason. Any cognitive or practical knowledge has belief and value packages wrapping it. Sefa Dei (2002) agrees that Indigenous epistemologies are grounded

in an awareness and deep appreciation of the cosmos; and self/selves, spiritual, known, unknown worlds are interconnected in the learning process.

Furthermore, practical knowledge contains technology and crafts subject matters. Training for skills acquisition such as building houses, weaving mats or baskets, agriculture, sanitation, hunting, singing and dancing, child upbringing, and pottery are cross-cutting contents. Tools and weapons making as well as simple industrial and manufacturing are also major skills contents. Ndofirepi and Ndofirepi (2012) observe that traditional education is pragmatic and practical preparing the individual for life and to pass on similar values to successive generations.

It is important to observe here that learners (both young and adults) are educated to recognize and interpret natural forces (weather, movement of wind, stars, the sun, moon) and to make sense of the ecological systems of the environment among others. Before colonial penetration into East Africa there were many advances in science and technology but today there seems to be complete vacuum. This view is reiterated by Grange (2000) when he points out that Non-Westerners have been generally kept ignorant about their science and technological advances because of hegemony of Western science and technology.

Practical, empirical knowledge and critical reasoning are noted in learning about climate, weather patterns, behavior, types and movement of clouds, ecological phenomena. These aspects are also taught to the young members of the community. In this content practical learning, reasoning and belief systems are incorporated. In East Africa, according to the author's cumulative observational knowledge, farmers plant crops just before new moon appears believing in very high chances of rainfall. But when fog appears in morning hours, it symbolizes dry weather pattern. Folke et al. (2000) strengthen this point when they argue that learning about natural phenomena operates in a knowledge-practice-belief complex.

Intellectual knowledge contents are associated with oral literature. Myths legends, poems, riddles, epics, and folklore contain subject matters sweet to the ear but demanding on the brain. They are vehicles of knowledge but also of beliefs and values. Perhaps it is right to note that in every activity of learning and life in Africa there is rational process going on because education entails ways of knowing, perceiving, and interpreting the world Shizha (2013).

Within IK contain normative/aesthetic values as subject matter that all members of the community must learn to fit into the life of the community. Mawere (2015) describes intangible heritage as aesthetic, spiritual, symbolic, and social. The social aspects include language, oral tradition, taboos, rituals, music, dance, art, folklores, riddles, and idioms among others. These form part and parcel of IK in East African Indigenous knowledge system. Among the Baganda, family values require both girls and boys to kneel while greeting visitors. Amanda (2008) observes that storytelling, experiential instructions as well as apprenticeships engage both expert/sage and learner.

Indigenous knowledge also involves philosophy and theology. In African, context philosophy is used here to mean African concern with traditional African universal or worldviews about life Higgs (2011). There are no people without worldviews because this shapes consciousness Owusu-Ansah and Mji (2013) and collective ethical values. They are transcultural and interdisciplinary. Learners are trained to speculate and also reason about meaning in the cosmos. For example, among the Baganda and Kikuyu as it is with other ethnic groups, adults may not explain meaning of proverbs or eclipses to the young. They have to search for meaning in actions and life situations as they grow. For example, the wise saying *Jafuoch a'mayeng* (meaning a disobedient child is always satisfied) does not imply exactly what it denotes. Belief in Supreme Being as the Master of life is common. Jopadhola altars of sacrifice at *Nyakiriga* Namono (2008) are not a subject for common talk. Learners speculate as the worshipper performs rituals. Through acts of worship, the worshipper also searches for meaning of life and nature of the cosmos.

Lastly, one would think IK does not have extracurricular activities. Indigenous knowledge is designed to contain cognitive, psychomotor, and affective domains. It is holistic, lifelong, and utilitarian covering all aspects of knowledge and life. Extracurricular subjects are submerged and intertwined into core subjects. The process was intimately integrated with social, cultural, artistic, religious, and recreational life Marah (2006). This is what the author terms as intra-curricular structure of Indigenous knowledge within the Indigenous education system. They promote a balanced growth of body, mind, and soul. The idea that African tradition education (and its knowledge) is non-progressive Loram (2017) deserves thorough counterchecking.

Aims of Indigenous Knowledge

There could be a thin line between Indigenous education and Indigenous knowledge. In this respect the two are used here interchangeably. One aim of Indigenous knowledge is to socialize young members into the community. Every community has sets of regulations, beliefs, taboos, customs, traditions, norms, values, behavioral patterns and practices as law syllabus. Education becomes a process of cultural transmission and renewal Funteh (2015). Before the 1960s many East Africans were socialized into cultural contexts Semali Ladilaus and Stambach Amy (1997). These laws are self-regulating and peace creating geared toward maintaining peace, harmony, solidarity, and co-existence in community. Akeredolu (2016) applauds African criminal justice that works for unity, love for one another, transparency, peaceful co-existence due to the good traditional laws and education. The focus was on the human person not the crime.

The African system of education is to empower the young to learn how to survive in life through the experiences and instructions from elders. They do this by adapting to the social and physical environment. As all Indigenous peoples have tradition of unity with environment and their cultural values Durie (2004)

they develop lasting relations with terrestrial environments and the biosphere. In this regard, education for life provides knowledge for survival. There is no idler because each member is expected to contribute to the welfare of the community through hard work and productivity Olaoluwa (2014).

Equipping learners with concepts, skills, and competences to exploit natural environment is another motive. Learners acquire knowledge of the rock properties and nature of soils (geomorphology). By observation and tracking of animals or their trails (experiments in natural settings), they study plants (Botany) and animal life (zoology). They learn not only their names, characteristics, values or usefulness, behavior, and medicinal uses (Pharmacology) but also how to conserve them. Study of animals (Zoology) is equally significant. Every child in the community endeavors to learn and master the names and behavior of birds, animals, and insects and their values or dangers. That is the reason [1] (1992) observes that African Indigenous knowledge of ecological zones, agriculture, aquaculture, and game management is more sophisticated than it was thought.

Indigenous knowledge is imparted to function as basis for problem-solving strategies in the local communities Gorjestani (2000). It can be used to empower the locals for development in many aspects (ibid). Drawing from Malaysian experiences DeWalt (1994) argues that ideas and guidance can be drawn from IK to improve agricultural output. Every day, pastoralists, peasants in East Africa use IK to interpret and understand weather patterns. The Indigenous person who has not attended formal schooling is a good geographer.

Critical thinking abilities, imaginativeness, creativity (through crafts, arts, and oral literature), and ability to reflect on what is observed, heard, or encountered in the social, natural, and political situations is equally important aim of IK. Elders use riddles and proverbs to entertain youngsters through creative powers of the mind Mapara Jocab (2009). *Michungwa ochiek mito achama*, in Dhopadhola,[7] meaning "oranges are ripe for eating" is a wise saying that means, "the girl is grown up and ready for marriage." This is creative use of natural environment to teach and to entertain.

IK enables learners to gain industrial skills for self-reliance and service to the community. The young learn these through apprenticeship—by observing and doing what they observe. Girls pick skills from expert weavers of mats and baskets to enable them to provide for the needs of their families in marriage life.

IK fosters knowledge of heavenly bodies (astronomy). Mastery of the motions, positions, and sizes of heavenly objects such as moon, sun, stars, and comets is vital part of IK. The locals observe and interpret clouds that bear rain and the ones that signify coming storms or dry season. The cumulative experiences in such matters have taught them to be scientifically accurate and predictive. That is the reason many traditional ecological knowledge narratives are being accepted by many agricultural scientists as useful Alexander et al (2011).

Structure and Position of Indigenous Knowledge Within Contemporary Knowledge Systems

Since the onset of Islamic culture and colonialism in East Africa, volleys of negative criticisms are used to punch IK. Mapara Jacob (2009) describes IKS as knowledge forms that have failed to die despite racial and colonial onslaught they suffered under imperialism and arrogance. Indeed, IK has been subjected to a lot of criticism. Boehmer (1995) and Mapara Jacob (2009) explain that in the eyes of the West natives remain simple children and subtle savages. Levi-Strauss (2001) argues that those labeled as primitive would better be called people without writing. Brown (1983) quoting Sir Charles Elliot (first Governor of British East Africa—now Kenya) argues that Maasai and many other tribes in East Africa must go under. Maasai-dom was a beastly and bloody system founded on raiding and immorality. Surely if Maasai are beasts, they cannot possess any knowledge even if it is local one. Brown (1983) also references excerpts from *The Manchester Courier* that pictured the Savage (San) as half human, half brute scarcely capable of the same improvement which the horse or dog exhibits under training of civilized man. To him, such a creature is surely un-teachable. The theory of social progress was also developed to describe nature of the colonized. It argued that the primitive colonized persons could not progress because they were child-like and childish Nandy Ashis (1989). It is common lamentation that formal education is heavily westernized and theoretical in content.

In view of criticisms by the West and some academics, the question is, where is IK found applied in contemporary sector structures? One sector is examined in this chapter to provide a response, namely education and school curriculum. In all nations in East Africa, IK is hardly incorporated in school curriculum. Owuor (2007) notes that in the Kenyan education system, there must be endogenous approach to education by among others, incorporating authentic and Indigenous knowledge and pedagogues. Ng'Asike (2011) observes that Turkana children in Kenya are among Indigenous communities in the world that suffer from an education system that does not recognize their cultural values and the resources of the people essential for self-determination. However, Vavrus and Bartlett (2012) point out that knowledge production occurs from within and is shaped by context. Epistemology is local not omniscient. Hence even those thought to be primitive generate their own knowledge that makes them to survive thousands of years.

Therefore, absence of IK in modern education system is a big error. In Uganda, the author made a simple survey to find out students "knowledge about local ways of treating diseases". There was a focused group discussion with Senior Four class (15–19 years of age).[8] It was noted that many of them are treated locally at home using herbal medicines before going to health centers. The commonest herbal medicines were; *Amaanda* (burnt charcoal) for diarrhea; *Mayembe* (mango) tree products for cancer and cough; *Jjobyo*

(vegetable with bitter taste for reducing pregnancy pains). Others were distilled ashes for treating cough and paw tree roots for snake bites.[9]

Though knowledge of herbal medicine is not included in the curriculum learners are aware. This gap calls for making the curriculum relevant as it is estimated that in Sub Saharan Africa, there is one traditional healer to every 500 people whereas there is only one doctor to every 400,000 people Falodun (2010). With these examples, it can be argued that Indigenous Knowledge occupies only a hidden but significant place in society. The basic problem is alienation of the curriculum. Kaya and Seleti (2013) note that modern education structures are inherited from colonialism but are based on values inimical to most African societies. They add that even institutions of higher learning cherish partnering with foreign institutions that do not recognize the role of IK in African societies.

Vitality of Indigenous Knowledge

Despite attack by Western culture and marginalization, IK has survived and still defines lives of the once colonized East Africans. For example, periwinkle, cashew gum, and mango are used by many people to treat hypoglycemic diabetic patients Balde (2006). Indigenous knowledge is still being used by the people of Teso (in Eastern Uganda) to interpret climatic phenomena. As agro-pastoralists they know that unlike in the past when reddish clouds were warnings for coming hailstorms, now hailstorms come without warning. Some trees have changed their leaf shading patterns but the people still use IK to explain the climatic changes Egeru (2012). Orlove et al. (2010) comment that people of Southern Uganda continue to use Indigenous knowledge climate indicators to predict rain, namely hot nights, shift in direction of prevailing winds, flowering of trees especially coffee, particular moon shape, blowing of whirlwinds, and arrival of migratory birds especially Hornbill from Ethiopia. This happens despite presence of meteorological stations nearby. Modi (2004) appreciates IK and methods of seed storage for planting and for food supplies after studying traditional methods of seed preservation of maize and taro in Southern Africa. Despite advanced methods of use of chemicals in Uganda, seeds are still preserved using IK in Uganda. Mafongoya and Ajayi (2017) observe that IK should not be ignored but used because it can promote poverty alleviation, traditional food production, and preservation.

The foregoing evidences show that despite prejudices against IK it is alive and active in East African region. The following metaphor can be used to summarize vitality of IK in African situation. In schools and contemporary education systems, it operates as hidden curriculum. In public sector, it functions as Prodigal Son *Good News Bible* (1876) (confer Luke: 15, 11–32) and in Western science and thought it is described as the Barren Fig Tree (ibid) (confer Matthew 21, 18–22; Mark 11, 12–25)[10]; yet IK is the taproot of all forms of knowledge. The pleasant thing is that though hidden IK

cannot be deleted because it is written in the hearts of Africans. It cannot repent because it is sinless, and it cannot be cursed because it bears juicy fruits of life. Instead discrimination should be eliminated because all knowledge aspects (African or Western) are rooted in culture and all share the same nature of localness Shizha (2010).

Conclusion and Recommendations

In the foregoing pages, the author has shown that IK is loaded with useful contents, the nature has not changed much though tortured and the aim of IK yesterday, today, and tomorrow is for life. IK has enduring presence in African communities despite odds. Let it be reiterated that useful discoveries and new insights have been got by researches. In addition to the studies already made by scholars more should be done to encourage Africans to re-define and re-discover themselves—and think new strategies to re-civilize and conquer themselves. As Semali Ladilaus and Stambach Amy (1997) observe, the outcomes of research in IK should be re-conceptualized into curriculum practices that are (exotic),[11] inclusive, and democratic—one that acknowledges individual African's heritage, experience, and identities. The Indigenous African ways of knowing, thinking, and being should undergo a new renaissance and upsurge due to their utilitarian importance Adeyemi and Augustus (2003)—aware that this age of Information and Communication Technology (ICT)[12] brings even worse threats to its vitality than before. Perhaps Julius Nyerere's recommendations for an education system that enables the learner to know, appreciate and develop a culture that preserves national tradition, individual freedom, responsibility, tolerance, and respect should be designed in the modern curriculum for the East African region Sanga (2016) and the rest of Africa. The Westernized IK should be re-Africanized and insulated against contemporary dangers.

Notes

1. A Luo-speaking ethnic group related to the Luo of Nyanza Province in Kenya and Langi and Acholi of Northern Uganda. They live in Eastern Uganda.
2. A Bantu-speaking ethnic group living on the northern shores of Lake Victoria in Uganda
3. They live on the slopes of Mt. Kenya and are the largest ethnic group of people in Kenya.
4. Name of Supreme Being believed to live on top of Mt. Kenya by Kikuyu who worship Him as Creator.
5. These are a nomadic pastoral people. They live in northwestern Kenya. Their main source of livelihood is cattle.
6. A pastoral community that live astride Kenya–Tanzania borders. They are popular in Western scholarship as hostile and war-like people.
7. A Luo language spoken by Jopadhola. See Appendix 1 above.
8. The survey was done in a rural-based Secondary School in Buganda called Nakanyonyi Secondary School.

9. The author has firsthand experience of being administered with paw tree roots crushed and mixed with warm water in 1987. A poisonous snake bit me in the evening and after the first aid hospital found that the poison was present but not active.
10. In *Good News Bible* (Second Edition) it appears as "The Lost Son."
11. The curriculum included contents of selected IK foreign ideas that matter in Africa including ICT.
12. As new phenomenon in science and technology it is a threat if it is not given appropriate attention. If ICT is overemphasized, it can delete many aspects of IK that is fundamentally not digital but depends mainly on active human memory.

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