OPEN ACCESS

MULUNGUSHI UNIVERSITY MULTIDISCIPLINARY JOURNAL (MUMJ)

Mulungushi University Multidisciplinary Journal
ISSN: 2958-3926
Vol. 4 No. 1

https://research.mu.ac.zm/research/index.php/mu

Indigenous knowledge and innovation among the Tonga and Toka-leya people of Southern Zambia

Joseph Mate[1*], Jive Lubbungu[1]

[1] Kwame Nkrumah University, School of Education, Department of Educational Administration and Policy Studies, Kabwe, Zambia ; Email: josephmate69@gmail.com
[1] Kwame Nkrumah University, School of Education, Department of Educational Administration and Policy Studies, Kabwe, Zambia; Email: lubbs1976@gmail.com

*Correspondence: Mate Joseph, Email: josephmate69@gmail.com

ARTICLE HISTORY Received 20 May 2023; Accepted 31 July 2023

ABSTRACT

This study sought to examine how the Tonga and Toka-Leya people of Southern Zambia use their indigenous knowledge and employ innovations in this knowledge in Monze, Choma, Kazungula and Livingstone districts. A sample of chiefs and their cultural gatekeepers, head headmen/women, District Cultural Officers and a Provincial Cultural Officer were sampled purposively. Being a qualitative research, case study design was used. Data were collected through face-to-face unstructured interviews and focus group discussions. Data were analysed using the thematic approach and reference to the theoretical framework. The study found that a lot of indigenous knowledge, indigenous system and their technologies have since been lost. The paper argues that documentation of IK of Zambia in this case and Africa in general is a sure way of preserving the future of Africa. It was also established that many adults, especially chiefs, headmen, headwomen and the gatekeepers (senior citizens), were very concerned with the rate at which the loss of cultural and indigenous knowledge was taking place. The major concern was the aspect of how children are raised in homes, how they are taught and what they are taught in schools and the lack of political will to make indigenous education core in the curricular and as key components of tertiary education and research. The study recommended that the Ministry of Education should directly and practically address indigenous knowledge issues by documenting, teaching, disseminating and also be seen to safeguard IK through the formal education from early childhood to tertiary level.

Keywords: Indigenous, indigenous knowledge, knowledge, indigenous systems, innovation

INTRODUCTION

There is abundant research evidence today that in every generation, community and society, people have developed, shared and transmitted various indigenous knowledge and skills from generation to generation. Batoka-Leya and Batonga people of Southern Zambia have not been exceptions in this socio-cultural phenomenon in their socio-cultural landscape. Kangwa (2012: 30) citing Giesler (2007), indicates that "the Toka people belong to the larger collection of Tonga people. They differ to a small degree from the Tonga of the Gwembe Valley, the Tonga of the plateau and the Ila mainly due to a century of intermarriage with their Lozi neighbours and rulers." The Leya, who have also intermarried with the Lozi people, on the other hand, are also a different group of the Tonga speaking people who are more related to the Lenje people of Central Province.

From time immemorial, Shalwindi (2013) found that the Toka and the Leya people have not only been rich in material wealth,

but in indigenous knowledge and indeed in their cultural heritage. They used the knowledge passed on from one generation to another orally and in practical activities to smelt iron and copper, to access salt, to herd and treat their animals, in curing human diseases and in producing and processing foods among other aspects. Chilisa and Preece (2005) explain that this kind of knowledge is called indigenous knowledge (IK) because it is locally generated and used with little and sometimes no influence from outside the local environment. Shapi, et al., (2012: 1445-1446), in their journal article 'General practices on indigenous knowledge system technology in selected regions of Namibia', described IK as "common knowledge to a particular community or people living together in a certain area, generated by their own ancestors' experiences." This is the knowledge and innovations in the current form that the study sought to explore.

Background of the study

Evidence abounds that Africa's culture, education, industries and economies were heavily and negatively affected by colonialism through imperialism which deliberately targeted to uproot and annihilate everything African in all the colonised regions (Rodney, 1970, Snelson, 1974, Tiberondwa, 1978, Mwanakatwe, 1968 and Chilisa and Preece, 2005). However, Mawere (2010), Tanyanyiwa (2019) and Chileshe (2020) observed that the African culture and its features have been resilient enough to last up until today with the scars of past history thanks to the oral and practical modes of teaching and appreciation by successive generations. Some local people managed to rid themselves of brainwashing ideas and ideologies of the Eurocentric worldview that African Indigenous Knowledge its systems and technologies are absolute. Mawere (2010) reveals that IK is an African way of knowing and doing things that still remains effective in the socio-economic and eco-sustainability of both the inanimate and animate aspects of individual, families, communities and societies. The Afrocentric worldview and the African Renaissance recently re-emphasised the need to do certain things the African way. Citing Agrawal (1995) and Briggs (2005), Shapi, et al., (2012: 1446) observed that from "… the 90's and the early 21st Century, there has been a keen interest in utilizing Indigenous Knowledge and Systems (IKS) into the development process, with Agrawal (1995) emphasising that IKS can be linked to the development of any community… as alternative way of promoting development." It is from this perspective that this study focused on 'indigenous knowledge and innovation – applying innovations in the use of indigenous knowledge to solve local problems and in so doing improve the quality of lives of people brutalized by poverty, hunger, diseases and unemployment. This was the nexus of this study. Much of the discussed IK and innovations thereof have to do with curio carving and metal smiting, agriculture, food processing and preserving, traditional birth attendance and language skills of the local people (the Tonga and Toka-Leya people) of Southern Zambia.

LITERATURE REVIEW

Meaning of indigenous

The word 'indigenous' has been generally seen as referring to unique groups of people who continue to live lives as their ancestors with little or no modern civilization influences such as the Khoisans of Southern Africa, the pygmies of the Equatorial regions and the Masai of East Africa. However, recent scholars and researchers advocate that this term includes also the 'local' and 'traditional' trajectories in all tribes or people (Warren, 1992) and in this study, therefore, the term indigenous means traditional and local.

What is indigenous knowledge?

Since the word indigenous is seen as referring to traditional or local the indigenous knowledge is local or traditional knowledge. Warren (1992) defines indigenous knowledge as traditional and local knowledge of a people generated over centuries of people's experiences transmitted from generation to generation mostly orally as opposed to knowledge generated by Western institutions and researches. Warren adds that indigenous knowledge is socially and culturally embedded in people's way of life as opposed to Western knowledge that is science based, research oriented and generated by

higher education institutions. Semali and Kincheloe (1999) see IK as knowledge that is specific to people through their learning and understanding of themselves in relation to their local environment, challenges and prospects. The definition of IK can be widely explained as "the local knowledge – knowledge that is unique to a given culture or society. It is the basis for local-level decision making in agriculture, health care, food preparation, education, natural-resource management, and a host of other activities in rural communities" (Flavier, et al., 1995: 479). Warren (1992: n.p) says "Indigenous knowledge, particularly in the African context, has long been ignored and maligned by outsiders" … but today a number of African governments and international development agencies have recognized the significant role and value of IK in attaining cost-effective and sustainable development in many African communities. In this vein, this study examined IK in terms of metal smithing, agriculture, food processing and preservation, traditional birth attendance and then language and curio carving skills of the Tonga and Toka-Leya people of Southern Zambia.

From indigenous knowledge (IK) to indigenous knowledge systems (IKS)

When our colonisers came to Africa, they assumed that we had no education and were illiterate, we had no religion and were pagans with no civilisation and were thus primitive (Snelson, 1974 and Tiberondwa, 1978). In agreement, Chilisa and Preece (2005: 42) citing Smith (1991:25) reveal that colonisers saw Africans as "people without minds or intellect, people who could not invent things, who could not create institutions or history." As a result, these newcomers imposed their way of doing things, their education, their religion and their civilization with the aim of destroying everything African and replacing such with Western modes. Chilisa and Preece (2005:42) reveal that in Africa, the "colonisers named Zambia Northern Rhodesia and Zimbabwe Southern Rhodesia. European explorers, travellers and hunters were notorious for claiming discovery of African lands, rivers, lakes and waterfall and renaming them; a violent way of dismissing the indigenous people's knowledge as irrelevant." This led to the marginalization of African indigenous knowledge and its technologies that form indigenous knowledge systems which today remain undeveloped and untapped for meaningful development (Warren, 1992 and Chilisa and Preece, 2005) hence the need to promote the African way of knowing.

The African ways of knowing and African perspectives and attitudes are bedrock of what is termed indigenous knowledge systems (IKS). Chilisa and Preece (2005: 42) define IKS as "a body of knowledge and the processes and technologies of producing, validating, storing, retrieving, disseminating and applying knowledge embodied in the language, legends, folk tales, and cultural experiences of Africa people." This is in agreement with Warren (1992) who revealed that IKS is seen in local botany, medicine, local construction, agriculture and food production, processing and preservation among other aspects of a people culture.

African researchers and scholars are urged to document such knowledge and knowledge systems; they are encouraged to teach these in institutions and revive people's zeal is the use of such valuable cultural facets for the benefit of many communities. Scholars and researchers must advocate and develop new ways of theorizing the research process in line the African ways of knowing, African Renaissance and Afro centrism. Chilisa and Preece (2005) say in doing so, research can be made responsive to the needs of local people in the communities. Such research will produce relevant knowledge, it will de-mystify the distorted perceptions of indigenous knowledge and knowledge systems and the forces that led to the stagnation of Africa's development.

The role of innovations in IK

Innovation is said to be 'the mother of necessity' as it embraces the novel ways of doing things by adapting new ideas, processes and methods embedded in indigenous knowledge and knowledge systems. This how innovation is perceived in this study; the indigenous ways that are creatively adapted to be part of the solutions to the Tonga and Toka-Leya people's local problems. Ndangwa (2007: 167), in his work 'Indigenous Knowledge Systems and Their Relevance for Sustainable Development: A Case of

Southern Africa', reveals that Indigenous Knowledge Systems (IKS) are relevant for sustainable development initiatives in Southern Africa arguing that "IKS can be an invaluable alternative to countries in the region that are overly dependent on modern technology in their quest to raise the quality of life of citizens. Especially that modernity has not always provided long-lasting solutions in the manner that Africa's natural resources have been harnessed, supposedly for the benefit of its inhabitants – the Africans." This is echoed by Shapi, et al., (2012) whose study of indigenous communities has used a number of innovations with Indigenous Knowledge and Technologies Systems (IKTS) in Namibia. Shapi, et al., (2012) found that IKST "signifies the ability and ingenuity of indigenous communities in Namibia to integrate nature and their environment into their way of life applying methods and systems by which the indigenous communities in various regions transformed the nature and their environment to advance their livelihood."

The role of innovation here is three-fold: 1. Making people creative and utilize local knowledge for value addition to abundantly available natural resources, 2. Using local knowledge and skills to revive age-old activities and market them well enough to earn a living from them and 3. Using knowledge centres or platform for conscientisation and mindset changes from the oppression of colonial and capitalism ideologies of dependence on Western view of white-collar jobs as the road to success (Chileshe, 2020 and Siamwiza, 2007). This is in agreement with Chilisa and Preece (2005:54) who argue that such innovation engender an African worldview, and promote "Cultural artefacts such as pottery, sculptures, home painting, mat and basket weaving and African cloth that express indigenous knowledge." The African worldview is indeed a Zambian and in this case the worldview of the Tonga and Toka-Leya people in doing things their way for their own benefit and that of future generations and their environment. The skills and knowledge applied to design and make things used in production and processing and storage of food can reveal a people's innovations; this was one key aspect of this study.

Another innovation has been the bringing on board the traditional birth attendants in health service provision. Citing Fleming (1994), Phiri (2006: 1) reveals that in the developing world, "The indigenous practitioners were recognised as a workforce that could be utilised as community health workers to help with the problem at hand as well as to represent a linkage of the traditional culture and the biomedical establishment." However, Chilala, et al., (2016: 1) reveal that "In 2010 the government of the Republic of Zambia stopped training traditional birth attendants and forbade them from conducting home deliveries as they were viewed as contributing to maternal mortality."

The findings by Chilala et al., (2016: 1) reveals that "Home deliveries have continued despite the community and Traditional Birth Attendants (TBAs) being aware of the ban. The ban has had both negative and positive effects on the community." The study established that some positive effects of the ban were "early detection and management of pregnancy complications, enhanced HIV/AIDS prevention and better management of post-natal conditions, reduced criticisms of TBAs from the community in case of birth complications, and quick response at health facilities in case of an emergency." And it was found that the ban also had negative effects such as "increased work load on the part of health workers, high cost for lodging at health facilities and traveling to health facilities, as well as TBAs feeling neglected, loss of respect and recognition by the community." This is supported by Chileshe (2020) who reveals that a Zambian child is conceived, born and raised by African food, treated when seen by African traditional herbs and medicines; the aspects he or she cherish way into his or her adulthood. He argues that traditional birth attendants cannot be replaced in indigenous communities even though modern means have been introduced since the invasion of Europeans two or more centuries ago. However, recently, in Zambia, the Ministry of Health has again recognized the role of traditional birth attendant in an attempt to reduce and probably eradicate the current high maternal mortality rate in the country. The integration of traditional birth attendants in health service delivery in Zambia was

one innovation worth saluting as the country grapples with inadequate qualified personnel in the health sector (Chilala, et al., 2016).

Language as knowledge

One West African saying is that 'no matter how long a stick stays in a river, it will never turn into a fish'. Shapi, et al., (2012) stress this stating that "indigenous people can never become Europeans however, much they try the western way of life" and no matter how well they speak in that foreign language. Language is culture and it is also a key aspect of indigenous knowledge. Chilisa and Precce (2005:55) agree and reveal that "Language stores, upholds and legitimizes the value systems of society … as it frames a problem, frames names, expressions, proverbs to mention just a few. Innovations in language make artists, musicians, poets, writers expressing cultural/indigenous/local knowledge in ways that are unique for income generation, individual and family development and preservation of culture and indigenous knowledge. The argument is that IK cannot exist in a vacuum; it exists in language, explained through language and documented by language and passed on from one generation to the other by word of mouth (Chilisa and Preece, 2005).

METHODOLOGY

Being a qualitative research, a descriptive case study design was found suitable and was thus used to guide the study in data collection, presentation and analysis. A sample of four (4) chiefs (Coona, Musokotwane, Mukuni and Sekute) and their cultural gatekeepers, twelve (12) head headmen and women (three per chiefdom), four (4) District Cultural Officers (one from each district – Choma, Zimba, Livingstone and Kazungula) and one (1) Provincial Cultural Officer based in Choma were sampled purposively from the four districts of Southern Province. Data were collected through face-to-face unstructured interviews with all the respondents. Data were analysed using the thematic analysis guided by research questions, literature reviewed and the theoretical framework.

The theoretical framework was based on Cultural Ecology Theory and Knowledge Systems Approach that examine the dynamic relationship between a culture and its environment (Behringer, 2010). Behringer explains that the two explore how humans adapt to their environment by being creative in skills, practices, technologies and knowledge to survive and tame their environment. In this framework, the focus was on the understanding how the Tonga and Toka-Leya people's traditional knowledge and innovation have developed as adaptive responses to the local ecological conditions of Southern Zambia. This theory was used to help identify the ecological knowledge, sustainable practices and resource management strategies that have been passed down through generations. The knowledge Systems Approach on the other hand recognises different knowledge paradigms and knowledge that are valid in indigenous knowledge alongside scientific knowledge. By applying this theory, the study explored the diversity of knowledge systems and innovative ways people explore among the Tonga and Toka-Leya people, including oral traditions, traditional medicine, traditional agricultural practices among others.

FINDINGS AND DISCUSSION

The findings of the study are here categorised and analysed thematically under the following themes: 1) seed selection, food storage and preservation through indigenous knowledge 2) agricultural indigenous knowledge 3) metal smiting and curio carving 4) indigenous knowledge and maternal and infant mortality 5) benefits of innovations in IK and 6) challenges in the preservations of IK

Seed selection, food storage and preservation through indigenous knowledge

The major finding under IK and innovations was on indigenous expertise in seed selection, food storage and preservation. Despite the promotion of hybrid seeds, use of fertilisers and using chemicals in cultivation, storage and preservations of food, there still exist Tonga and Toka-Leya people who still have knowledge and faith in indigenous knowledge and traditional ways of life in these matters. Respondents said they were known and often seed

selection and storage knowledge. They still use special and expertly selecting 'healthy' or well grown cobs of 'gankata' maize seed (the traditional maize), millet and sorghum for storage. The storage of seeds in kitchen roofs preserved by smoke from fire places all year round is still widely practiced. So is the use of ash to preserve grains. Evidence was found of using traditional granaries with maize from the previous year still intact without use of chemical anti-pests sprays. These findings are similar to Warren (1992) and Agrawal's (n.d) submissions that indigenous knowledge should be considered key in the process of national development of locally value added products as there is no doubt that indigenous technologies/practices contribute significantly to the household food security and community security. Therefore, documenting it in books would serve the future generation in Zambia and Africa at large. This is emphasised by Shapi, et al., (2012) who found that IK remains significant in local food production, processing and preservation. This illustrates innovative means where indigenous people derive indigenous technologies from skills and knowledge learned and through experiences and experimentations.

Agricultural indigenous knowledge

The study established that cultivation of land was widely traditionally managed since time immemorial by means of practicing a form of intercropping, crop rotation and ploughing around the slope. The informants indicated that they acquired the knowledge through observing their parents, grandparents and other community members and became experts on their own with time.

In terms of agro-forestry, the study found that local knowledge was rich in the significance of trees in their fields helping them in taking care of the soils. Even the semi-commercial 'converts' who ventured into hybrid seeds and rearing of broiler and layer chickens have started planting traditional crops such as finger-millet, sorghum and cassava as security from this drought-prone area. It is in this light that Semali and Kincheloe (1999) see IK as knowledge that indigenous people utilise their age old knowledge grow crops, rear livestock through their learning, understanding and adapting themselves to their local environment, challenges and prospects. Consequently, crops grown are those tolerant to soils, heat moisture/precipitation and growing periods of their specific regions. This has made local people such as the Tonga and Toka-Leya people to sustainably continue inhabiting some areas and not others for centuries despite outsiders' contempt of some of such areas.

Metal smiting and curio carving

The major innovations found in the chiefdoms namely ground water location and management, midwifery, food processing, metal smiting and curio carving. Local people say they more often use local knowledge to identify areas that have ground water near the surface and where sinking a borehole and well can be done so with accuracy and effectively. Some elderly men in chiefdoms pointed to aspects of soils, rocks, trees and grass types as holding key to this identification. They said: *What we know has been handed down from generation to generation and continue to be used with accuracy. We refer to vegetation and soils including access to water with our local language. We know which tree is good for curios and which one is not and which metal to use for which purpose.* (Focus Group discussion with curio and metal smith experts) (Mate, 2023). Rodney (1970) reveals that African had expertise sculpturing and metal smithing centuries before Europeans and other races stepped their feet on the continent. Such IK was the basis of indigenous technologies and indigenous industries that supplied all forms of ornaments, utensils, equipment and weapons each for its own relevance to the local people. This is supported by Chilisa and Preece (2005), Mawere (2010) and Chileshe (2020) who individually indicated the role of IK in metal and non-metal expertise of Africans, as it is with other races in other continents and sub-continents. The implication here is that people not on learn but innovate to improve their tools for easy adaptions to the cultural practices and beliefs – their tangible and intangible environment (Behringer, 2010). Using the Cultural Ecological Theory and Knowledge.

Indigenous knowledge and maternal and infant mortality

Chilisa and Preece (2005) documented the use of cactus plants by indigenous San in Southern Africa in treatment and suppressing the desire for in curving, taking in food and how some Western company tapped in developed a slimming pill out of this indigenous knowledge claiming this discovery and profiting from the business. This is an indication of the value of the knowledge local people have and how innovations in local plant values can improve people's lives. This study also found that the Tonga and the Toka-Leya, have for a long time, relied on traditional herbs and medicines in treating various ailments and both rural and urban populations continue to do so. The traditional healers, Traditional Birth Attendants and other herb sages have revolutionized their practices by building better structures where to practice from, methods of processing their herbs and medicines and packaging thus continuing to attract people from all spheres of life to their practices Chilala, et al., 2020). Chilala et al, shows how IK is still relevant especially where clinics and health centres are still not accessible, even more that 55 years after independence in Zambia. TBAs remain critical in delivering children, helping mothers and babies survive and reduce infant and maternal mortality.

The cultural officers revealed that some well-known practitioners have been attracted by foreign clientele and frequently cross borders to practice and earn a living. Even when it comes to birth attendants, specialized ones were and continue to be present among the two indigenous groups benefiting many women, many families and communities especially where modern health centres are either not there or not ease to reach. The period under the ban of TBA witnessed the increase of both maternal and infant mortality in Kazungula District (Chilala, et al., 2016). The acceptance of the significant role played by traditional birth attendants in the health service delivery was acknowledging that IK is important in quality health service delivery. The findings of this study also found that the presence of local birth attendants no doubt played and still play a pivotal role in bridging the gap left behind by lack and inadequate provision of trained health officers while reducing maternal and infant mortality in local areas.

The study also established that traditional foods have become popular in homes, restaurants, lodges and hotels. The local knowledge on such foods and how to preserve and cook them is now the envy of every woman and the key to attracting customers in the food industry and in tourism too. Innovation-wise, people are earning a leaving, creating market and employment on the basis of traditional food and traditional knowledge in this sector. Evidence was abounding that the processing and packaging of such foods is a big sector in the SMEs part of the economy in the two districts. Local or indigenous vegetable drying, processing and preservation have downed now and are increasingly being promoted in all four districts. Some women in the four chiefdoms revealed in the focus group discussions that they have awaken to the value of traditional vegetables in the market and in the urban market and across the borders of Zambia.

It was also found, for example, that the traditional local non-alcoholic drink called *maheu* in Silozi' and *chibwantu* in Chitonga or *bbwantu* in Toka-Leya have been hijacked by the commercial market who have added preservatives and flavours changing the original drink in taste and flavour in the name of commercialisation. This finding is in agreement with Nakata (2002) who indicates that to capitalists, indigenous knowledge is just another resource for potential profit making. However, this has not taken away the 'sweet-beer's popularity among construction workers, travellers on foot and bicycles and farm workers; and that a number of women have been engaged in this for years as income generation activity for their families.

A look at documentations in the Livingstone Museum showed that in the history of Zambia and indeed the works of David Livingstone, and Elizabeth Colson the Tonga people were and have been keen in the metal smiting. The visits to both chiefdoms showed a number of indigenous knowledge is working on metal for utensils, farm tools, hunting and fishing spears and weapons. Shapi, et al., (2012) in their study on indigenous knowledge and indigenous

knowledge systems in Namibia had similar findings were they found that indigenous knowledge and skills in mining and metallurgy were present in Omusati and Kavango regions of that country facilitating the provisions of various utensils, tools and weapons and employment with higher potential for commercialising this sector. The study also established that the products are a result of knowledge and skills earned through apprenticeship, observation and developing interest in what adults and peers were doing and earning a living from such indigenous ways of doing things. The same was found about the curio carving knowledge and skills leading to a big market for such products in the region.

Benefits of innovations in IK.

The study found that with the changing rainfall pattern and that droughts becoming a common phenomenon in the region, the threat of hunger is prevalent especially in the peri-urban and the rural areas, the participants said reliance on modern and commercial crops may not assist rural people fight hunger and poverty. It was established that people can only overcome these vices by turning to the indigenous African ways of doing this while not completely abandoning what is modern. A mixed approach was recommended. This applied to food production, process and preservation vis-à-vis food security, fighting hunger and poverty in the drought prone areas of Southern Zambia.

In connection with the above scenario, it was found that some form of effective water management in the drought prone areas is of significance. It was claimed that the decline is the respect of traditions and cultures and practices of local people have had dire consequences on the environment, water bodies and hence the drought and frequent aspects of lack of adequate clean water for people and animals. The participants said there was need to stick to their own 'tried and tested ways' of managing resources such a forests and woodlands, wild animals and water. The study also found that traditional knowledge of helping mothers to deliver successfully has played a pivotal role in reduced maternal and infant mortality. On this basis, Behringer (2010) argues that cultural ecologists focus on flows of energy and materials that result in examining how beliefs and institutions shape culture and innovations.

Challenges faced in preserving IK

Lastly, the study established the colonial impact on the decline in the use of indigenous knowledge was mainly through Western education, Western culture, Western religion and Western civilization and globalization have had dire consequences in destabilising all indigenous systems in order to plant their own systems. Chilisa and Preece (2005) observe that westernisation and globalisation have been at the centre of alienating young people from their cultures, their traditions and customs as they prefer borrowed cultures, traditions and customs for the satisfaction of peers pressures and acceptance to a specific group cultures to the detriment of indigenous culture, research and Africa ways of doing so. Other challenges were lack of relevance of IK in the modernity forms of formal education (Mawere, 2010 and Tanyanyiwa, 2019). Other challenges of safeguarding IK are related to inherent weaknesses of this knowledge such as reliance of transmission by word of mouth, little documentation and stiff competition with other versatile technologies and literacy forms that are delivered by written documentation, limit to specific communities and declining direct teaching of this knowledge among children and the youth stifles the flourishing of IK in the chiefdoms in questions (Mate, 2023).

CONCLUSIONS

The study established that IK in still prevalent in all four chiefdoms. Evidence was that indigenous people, metal smiths, traditional attendants, curio carvers and sculptors in general still have rich indigenous knowledge that they use side by side Western knowledge to sustain their lives, their communities and in their pursuit of meaningful development. The conclusion is that IK is still key in people's lives and sustainable development. With this in mind, one notices the relevance of this knowledge to all indigenous people irrespective of gender, upbringing and religious orientation (Chilisa, et al., 2005, Shalwindi, 2013, Chileshe, 2020 and Mate, 2023). Having found that it is increasingly

becoming rare in some aspects to find people using IK the study concluded that each upcoming generations will be more alienated from IK both in theory and practice than a generation that precedes the other generation.

RECOMMENDATIONS

The following are the major recommendations of this study:

1. he study established that little teaching documentation and direct teaching of IK from Early childhood to tertiary, there is a need to create a stand-alone institution to be in charge of indigenous knowledge in Southern Province and beyond.
2. t was established that the no much significance of IK by some school authorities to the education by some older generation hence the need to needs to prioritise IK by funding research in this area and documentation that is costly**.**
3. There was no robust training of in revitalizing IK in the Traditional leaders. The study recommends for strong partnerships to push the auditing of IK and preserving this this knowledge.
4. Parents were found to be less interested in teaching IK. Based on this, it was recommended that parents need to take it up on themselves to continue up teaching children their languages and traditional skills and sharing knowledge with the young generations for continuity.

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