

Exploring Indigenous Knowledge for Sustainable Development: The Case of Social Studies Education In Botswana

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Abstract

Concerns have been growing on how the local knowledge of the people, especially in traditional Africa, could be incorporated into the development process for endogenous development. Considering the implications of these concerns in the education sector, this paper interrogates the role and relationship of indigenous knowledge in the teaching and learning of social studies as a school subject in Botswana. Specifically it discusses the rationale for social studies, the place of indigenous knowledge system (IKS) in sustainable development and how it could be used to enhance social studies content; thereby producing fully rounded citizens. Among others, it is suggested that the country's primary social studies curriculum and textbooks be enriched with the identified indigenous knowledge content and methodology to make the young learners appreciate and adopt IKS in the short and long runs.

Key Words: *Indigenous Knowledge, Social Studies, Western Education, Traditional African education, Sustainable Development*

Introduction

The recent upsurge in research on indigenous knowledge systems (IKS) in much of Africa is largely informed by aspirations for sustainable development (Gorjestani, 2000; Nyong, Adesina & Elasha 2007; Mapara, 2009). Concerns for a synergy between local knowledge and western scientific ideas have assumed special significance in the region for reasons of transformative challenges facing the people in such critical areas like biodiversity management, food security, democracy, technological advancement, and promotion of progressive cultural values. Indeed, it could be argued that the integration of IKS, especially through formal and informal education, into the development process is *sine qua non* for making it meaningful, acceptable and enduring among the target beneficiaries (Kothari, 2007; Haverkort, 2009).

As interest in the integration of indigenous knowledge into formal education for sustainable development continues to grow, the need arises to interrogate the relevance of school subjects such as social studies in this process. This paper explores the potentials of integrating indigenous knowledge system into social studies education for promoting sustainable development in Botswana. Accordingly, the paper was conceived with four specific objectives: one, to examine the relationship between indigenous knowledge and sustainable development; two, to review the dimensions of IKS in Botswana against the backdrop of emerging issues in the country three, to draw out the interface of IKS and social studies education; and, finally, to highlight the implications for curriculum and teaching of the school subject in Botswana. A general summary concludes the paper.

Indigenous Knowledge and Sustainable Development: A Conceptual Overview

The term “indigenous knowledge” has been used interchangeably with such other terms like “local knowledge”, “traditional knowledge”, “community knowledge”, “indigenous knowledge systems” and “locally evolved knowledge system” (Rahman, 2000; Chigora, Dzinavatonga & Mutenheri, 2007; Haverkort, 2009; Gupta, 2011). However, the divergence in terms used does not remove from

the central issue in IK which is the need to factor in the target beneficiaries into the process of their own development.

According to Warren and Cashman (1988:3), indigenous knowledge is “the sum of experience and knowledge of a given ethnic group that forms the basis for decision-making in the face of familiar and unfamiliar problems and challenges”. Mapara (2009: 140) equally defines indigenous knowledge systems (IKS) as “a body of knowledge, or bodies of knowledge, of the indigenous people of particular geographical areas that they have survived on for a very long time”. It is possibly for the reason of making people to own their own development that recent concerns for endogenous development put serious emphasis on the revitalization of local and indigenous knowledge as well as inter-science dialogues (Haverkort, 2009). The indigenous knowledge system, unlike the Western, formal, knowledge system, is oral, undocumented, and simple and largely dependent on the values, norms and customs of the folk life, production of informal experiments through trial and error, accumulation of generation wise intellectual reasoning of day-to-day life experiences, loosed and rediscovered, practical rather than theoretical, in addition to being asymmetrically distributed (Gupta, 2011).

The increasing global focus on the interface between indigenous knowledge and sustainable development is informed by the failure of past national resource management policies, especially in Africa, which adopted a top-down approach where local populations were not accommodated in the process. As noted by ENDA (n.d), the increased advocacy for the rights of indigenous populations to participate in the decision-making process for issues related to local development have raised consciousness on the need for bottom-top approach policies, thereby encouraging local participation in developmental activities and projects. In addition, it has now been realised that indigenous and western systems of knowledge do not contradict, but rather complement, each other (ENDA, n.d).

Indigenous knowledge evolves from the culture and traditions of the local people to which it applies. It should, therefore, provide the foundation for meaningful formal scientific enquiries and education in any given community or country. Indigenous

knowledge system is unique to the society or culture to which it applies and it is a system that has been passed from generation to generation, tried and tested over time and proven to produce the desired results (Raselimo 2003; Mosothwane, 2007). And it is only when the knowledge-base of the people forms the foundation for new activities and programmes that the developmental process can be sustainable. Kaya and Maleka (1996: 66) have argued that indigenous knowledge for sustainable development is not necessarily what is traditional but whatever the affected people regard to be “an authentic expression of themselves”. Like in other areas of life, any education system or subject content that does not include indigenous knowledge would be lacking in terms of relevance for the people whom it is designed to serve.

The Context for Indigenous Knowledge Integration in Botswana

Botswana is a land-locked country in the centre of Southern Africa lying between South Africa in the south, Zimbabwe in the north-east, Mozambique in the East and Namibia in the West. It covers an area of 582,000 square kilometers with a population of approximately two (2) million with an annual population growth rate between 2001 and 2011 of 1.9 percent (www.bic.co.bw).

Botswana presents a relatively flourishing economy in Africa mainly through the export of diamond found in the mining towns of Orapa and Jwaneng. Coal and other minerals have of late been found and are actively being mined in different parts of the country. The semi-arid climate of Botswana has been an advantage in cattle farming and the sale of beef to the European Union. Mopani trees in the north of the country, shrubs savanna in the North West and swamps well known for the diverse bird life are among the dominant vegetation covers in the country (May, 1987).

Before independence, Botswana was called Bechuanaland and was ruled through a system of indirect rule called chieftainship. The central or meeting point of every village was the Kgotla which is still in existence and its role has been modified through modern democracy. The Kgotla served as a form of meeting place for the overall administration of the villages (Molutsi, 1993). This system

of leadership was consultative in nature which explains why it has been easy for it to be complemented with modern democracy. The country boasts of a stable democratic government since independence in 1966 to the present day.

Upon attaining independence, Botswana embarked on drastic reforms to improve the country's education system. Today, the country runs over 250 government sponsored primary schools, junior secondary schools and senior secondary schools. The country operates an education system of 7 years of primary education, 3 years of junior secondary schooling and 2 years of senior secondary schooling resulting in the award of what is called Botswana Government School Certificate (BGSC). Educational fees are shared by parents and the government but children from poor backgrounds are fully funded by the government. The government still offers scholarships for tertiary education locally and internationally. However, the country is currently facing many youth-related problems such as unemployment, alcoholism, drug abuse, and unprotected sex leading to one of the highest incidence of HIV/AIDS in the world (Adeyinka & Ndwapi, 2002). It could be argued that many emerging challenges in the education and other sectors in Botswana are not unconnected with lack of synergy between formal education and the traditional knowledge or informal education system.

African Education and Indigenous Knowledge System

Central to indigenous knowledge system in Africa is the traditional education. African societies, like any elsewhere in the world, have always had one form of education or the other which was indigenous to them and which is subsisting till date. However, unlike in the western system which is conducted in the formal school set-up, traditional education goes on in informal settings like homes, farms, worship and community centres, markets and the neighbourhoods (Ogunyemi, 2000). In pre-colonial Africa, including Botswana, the traditional African education system provided the platform for cultural transmission and the promotion of the indigenous knowledge systems.

The formal school system is a colonial heritage which does not take adequate account of the traditional knowledge system. As argued by Fafunwa (1982:9), "no study of the history of education in Africa is complete or meaningful without adequate knowledge of the traditional or indigenous education system prevalent in Africa prior to the introduction of Islam and Christianity." In pre-colonial Africa, the purpose of education was functionalism and immediate induction into the society; which is the goal of citizenship education in contemporary times. Indigenous knowledge provided the philosophy, content and practices of traditional education which are tailored towards serving the needs of the society (Fafunwa, 1982; Rwomire, 1998). The content of African traditional knowledge system encompasses the wisdom, knowledge, and teachings of the communities. In many cases, valuable traditional knowledge has been orally passed for generations which could be harnessed to enrich current formal education system. Some forms of traditional knowledge are expressed through stories, legends, folklore, rituals, songs, and even laws.

Perhaps the most critical point of interface between western education especially modern science and traditional education (local knowledge system) for effective citizenship education is culture. Every education system derives its relevance from the cultural values of the people for whom it is designed (Ogunyemi, 2000). Our knowledge of the world is given to us in the modes by which we enter into relations with the object of knowledge. An understanding or knowledge of world cultures is not in itself enough, as our experiencing of other cultures should be done through our own cultural lenses. Education, being the means through which societies have transmitted their values from generations to generations, remains the battleground for cultural globalization.

For the Africans, sacred sites and intangible cultural heritage are intimately woven together and cannot be easily separated. These allow the people to balance developments in the environment that they have occupied since time immemorial. This knowledge is indeed the pillar of their culture and the posts that sustain their survival. Deviation from the people's traditional knowledge has grave dangers for the world and for humankind. Thus, there is an imperative not

to divorce western acquired education systems from the indigenous knowledge. This is so because, IK is the basis for local traditional decision making process which affects the lives of all the people within it and it is also the symbol of their cultural identity (Warren, 1991; Flavier *et.al.* 1995).

However, the people cannot afford to limit themselves only to their own knowledge. The aim should be how to combine the best from their traditions with the best of western traditions. This would be quality in a true sense. Our cultural specifics are also contributions to a universal culture and not mere relics of a disappearing past. This means that elements from local cultures and knowledge should be included in education for other people as well as their own use. By so doing they are not only ensuring transmission from generation to generation but going further to showcase their IK and connect with similar or different IKs but speaking to the same issues. This will ensure growth and development of the people's IK beyond their own borders.

In essence, what is required in the African context is to domesticate western knowledge system to fit into the people's cultural context. This is because cultural neutrality does not exist between cultures; once a cultural artifact passes from one culture to the other, modifications occur. These modifications could be in form of restructuring in order to fit the new or foreign individual. They happen to meet a commodity need of the recipient. According to LeBaron (2003), cultural fluency is the capacity to exercise cultural choices with awareness that all behaviour and interpretation is cultural and subjective. Indeed, the way people interpret their world shapes their understanding of themselves, nature and divinity (Tedla, 1995). Hence, emphasizing indigenous cultural values within formal education makes better meaning because it builds on the people's ways of life to further develop them.

Discussing and understanding indigenous knowledge and beliefs afford teachers and their students the chance to review the interaction of indigenous epistemologies and western epistemologies (Semali & Kincheloe, 1999). In order to find new methods and produce new knowledge, both epistemologies need be considered as to how they relate and influence each other. Asante (1980) opines

that, for us to understand and effectively teach an African child, teachers need an understanding of the philosophical foundations of African education. This approach he calls *Afrocentric*, and explains that an Afrocentric education has as its central purpose the construction of a social reality of an African worldview, framework, culture and history.

Beside the possibility of philosophical interface of IKS and African education, Freire and Faundez (1987:46) explain that "indigenous knowledge is a rich resource for any justice-related attempt to bring about social change". Multiple perspectives on education enable educators and researchers in the field to clarify the purposes of education and understand where their students are coming from. Thus, engaging in differences is more empowering than a monolithic or narrow approach of western education. In addition, integrating traditional knowledge into education enriches the work of the educator and learners in planning school experiences based on the basic principle of known to unknown, simple to complex and immediate to remote. This is perhaps why Semali and Kincheloe (1999:49) argue that "An understanding of both indigenous knowledge and indigenous educational practices is necessary for the insightful educator to integrate such curricular understanding into his or her teaching". And, as they counsel, teachers need to tease out and analyze indigenous knowledge in the locales in which their schools are located and from where their students come.

Integrating IKS into Social Studies Education

Social studies was not taught in the schools in Botswana until late 1970s when it replaced geography and history in the primary schools (Mautle, 1988). However, the subject is today taught from primary school up to the university level (Adeyemi, 2008). In spite of different ways of looking at social studies, its goals remain much similar across nations where it is taught. Globally, the rationale for teaching social studies in schools lies in its promotion of appropriate knowledge, skills and values for effective citizenship in a dynamic world.

Garcia and Michaelis (2001:10-11) posit that the justification for the teaching and learning of social studies "typically includes the assumptions, beliefs, philosophy, or special characteristics underlying the curriculum." The ideal social studies curriculum should aim at transmitting basic aspects of the people's cultural heritage and develop students who are self-directed and active participants in the development of their society. Central to social studies education in Botswana is the promotion of "cultural pride, tolerance and pragmatic attitudes towards critical issues such as gender, HIV/AIDS, globalisation and total commitment to the nation's development goals" (Ogunyemi, 2008). This is within the context of the country's five national principles of democracy, development, self-reliance, unity and *botho* (earning respect by first giving it to others) in its drive towards Vision 2016 (MoE, Botswana, 2005,). Dube (2009) argues that the social studies curriculum content should be taught in ways that reflect the definition, purposes, themes and concepts of what is taught without divorcing it from their socio-cultural backgrounds and environments. From this perspective, social studies should endeavour to reconcile citizenship education in the traditional Tswana culture with the requirements of modern democratic citizenship.

Available research suggests that the promotion of indigenous knowledge system (IKS) for sustainable development is gradually gaining an increased momentum in nearly all areas of human endeavor in Botswana (Kaya & Maleka, 1996; Kalikawe, 2001; Tlhalefang & Oduaran, 2006; Moatlhaping, 2007). The strong emphasis on the use of Setwana as a second official language beside English as well as a medium of instruction in schools in Botswana is expected to keep young ones in touch with their roots as well as communicate local knowledge in the economic, political, scientific and socio-cultural lives of the citizenry. Social studies remains one of the key school subjects with enormous potential for empowering the country's children and youth in this respect.

Indigenous knowledge abounds in every society and Botswana is not an exception. The problem that the country faces is that with the advent of western education, much of our indigenous knowledge has been abandoned or left out and classified as belonging to the

less educated or outdated. This is a very dangerous and anti-development approach of dealing with IK. One way of correcting this is to integrate or infuse IK into the curriculum of social studies in Botswana schools. Infusion speaks to the careful selection of content in relation to existing subject content and incorporating it within in order to strengthen or improve the quality of existing content. On the other hand, integration means the fusion of two different but related knowledge content into one. The argument being raised here is that both approaches could be used in the incorporation of indigenous knowledge into the western education knowledge system in social studies content.

It is important that the education system of any country be designed such that it reflects the true cultural diversity of the nation it serves by infusing or integrating within it relevant IK. What is required, according to Nakata (2002), is recognising the complexities and tensions at cross-cultural interfaces and the need for negotiation between "indigenous knowledge standpoints or perspectives" and Western disciplinary knowledge systems such that meanings are reframed or reinterpreted. Above all, local knowledge should not be compromised for any reason, because, it is the main ingredient for cultural identity through education. Research on indigenous knowledge (IK) and participatory planning would draw attention to community-based, informal and often traditional institutions that play an important role in Botswana education system. These institutions are often culturally and environmentally specific, and rooted in the social capital - the IK, social relationships, shared values and networks - of a society or community.

Thus in the teaching of social studies in order to achieve its major goal of citizenship education, such issues should be taken into consideration and be explicitly reflected within the social studies curriculum. Indigenous knowledge systems are found in every part of our lives. Examples of some of the most well-known areas that have direct bearing with social studies education include issues of weather and climate, food storage and preservation, agriculture and environmental care and sustainability. These are cultural and environmental specific. However, issues that pertain to responsible

citizenry and decision-making cut across cultures but in different practices. A few of the examples are discussed as follows:

Weather and Climate

Western scientific knowledge has brought with it many advantages and at the same time disadvantages which if left unaddressed result in the extinction of local cultures. Lefale (2008) in support of indigenous knowledge argues that it is possible that scientists may be missing some valuable insights into climate change, climate prediction and mechanisms for coping with climate variability by not taking this knowledge on board. This shows that despite the high value attached to western education there are other forms of knowledge which if taken into consideration would prove very valuable and make the study of weather and climate easy and more localized. In traditional Tswana culture there is knowledge that speaks and explains weather and climatic change and upon which predictions and preparations were made in the past. The setting of a new moon was very symbolic in Setswana culture as bringing new life; issues of spirituality were very tied to the position of the moon. The people knew the exact number of days a moon would be available before what they called its death. At this time again they knew the length of time between a new moon and the next one.

The Bakalanga of Botswana have a twelve month calendar with each month named according to activities that occur during that time of the year. Thus, knowledge of the traditional names could be used as a basis for teaching students months of the year in English. Furthermore, the cultural social and economic activities associated with each time of the year could also be taught same way. Of course, this is only possible if the teachers have the knowledge of the months in Ikalanga language

Democracy

In teaching about democracy as a system of government and how it operates, Botswana social studies teachers could use the *Kgotla* as an example of a traditional democratic institution. The *Kgotla* is a traditional meeting place where the chief presides as the officer in charge at all times. Issues that affect the village, ceremonies and

traditional gatherings are held at the *Kgotla*. There are Setswana proverbs that speak to good governance, the role of the chiefs and issues of equality and freedom of speech. Examples of such proverbs are: (a) *Mmualebe o abo a bua la gagwe* (Everyone has a right to air their views without interruption); and (b) *Mafoko a kgotla a mantle otlhe* (All words at a *Kgotla* meeting are worthy of being heard). In relation to the role of the chief as the leader, we have amongst many, these three (a) *Kgosi thotobolo e olela matlakala* (The chief is the leader and father for all; all problems are brought before him for solutions). (b) *Molaakgosi o abo a itaya* (When an individual advises the chief, it is for the good of the tribe including the one advising); and (c) *mafoko a kgosi a agelwa mosako* (what the chief says as the head should at all times be listened to and obeyed).

Implications for Curriculum and Teaching

Integrating indigenous knowledge system in Botswana has a lot of implications for social studies curriculum and teaching. In the first place, it could be seen as an attempt to improve the overall quality of education in the country. Quality in education is not an absolute and static concept because education relates to the culture and community it is supposed to serve. It is important to understand that Africans have a rich reservoir of knowledge as a part of the cultures which she should preserve and ultimately develop over time. Indigenous cultural heritage involves a holistic approach where traditions and knowledge are embodied in songs, stories and designs as well as in the land and the environment the intangible inter-linked with the tangible (Tlou and Campbell 1993). This therefore calls for urgent efforts to review the curricula for social studies at both the school and teacher education levels in order to enrich them by infusing IKS.

Another implication of incorporating IKS into formal school social studies is using informal ways to promote its teaching so as to harvest the home experiences of the learners for school learning. When teachers understand students' perspectives on education, their traditional knowledge and histories, they are better placed to assist them through the integration of the two. That understanding also helps students develop multiple perspectives towards education and

how those different perspectives can create a critical consciousness that single perspective cannot for effective citizenship education. And it is only when the citizenry grow to be this focused, critical and progressively informed that they can contribute meaningfully to sustainable development of their society.

With integration of IKS also comes the challenge of reconceptualising the goal of social studies education to further deepen it within the Afrocentric sense. According to Adeyinka and Ndwapi (2002), education is the process through which adult members of the community help younger ones to learn, grow, and get initiated into the culture of the society into which they have been born. Schooling is therefore only a phase in the education of children. The foundation for schooling is nothing but indigenous knowledge which has been passed from generation to generation and refined over the ages by human needs and changes in lifestyles. The gap between indigenous knowledge and schooling can only be closed through the integration and infusion of indigenous knowledge into western education. If schooling is indeed a phase in the life of the child's education, then indigenous knowledge is a lifetime process. Adeyinka and Ndwapi (2002) further argue that given this perspective it is important that the time spent in school is well spent on well planned instruction. It can only be well spent and planned if students identify and make sense of it. This tasks the policy makers and curriculum planners on the need to bring local interest groups and community leaders on board as partners at critical points of curriculum review especially in the field of social studies education.

Summary and Conclusion

Traditional indigenous education and its structures should be respected and supported so that future generations can trace their cultures through it. African traditional knowledge may not have been written or documented by the peoples of Africa. However, they dance it, they draw it, they narrate it, they sing it, and they practise it. There is therefore the need for a deeper understanding of what knowledge and learning is and the many paths to knowledge. Western formal education systems tend to emphasize the acquisition of knowledge to the detriment of other types of learning. They are

not to blame because Africans have not come forward with their own indigenous knowledge system and how it has sustained their lives.

This paper has called for increased efforts to deepen the content of indigenous knowledge system in social studies education for sustainable development in Botswana. While recognizing the enormous challenges associated with this proposal, it is gratifying to note that the ongoing activities in the area of curriculum review hold some promise for an indigenous knowledge-infused social studies programme in the country.

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