

RETHINKING EDUCATION FOR SUSTAINABLE DEVELOPMENT IN AFRICA

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Abstract

This paper makes a case for a revalorization of all indigenous knowledge in general and African indigenous knowledge in particular. It invites African policy makers and intellectuals to do a little more to bring indigenous knowledge within African educational stream with the view to increasing the potentials of development in Africa. Since there are a variety of educational theories, including the functionalist, the conflict, the critical, the pragmatic and the Afrocentric educational theories, the paper advises that the adoption of the pragmatic and Afrocentric educational theories will integrate African indigenous knowledge and current educational systems, thereby promoting the development of a holistic African educational system. Consequently, three recommendations have been proffered that will enhance the development of indigenous knowledge and integration of same within the current African educational system.

Keywords: Education; Indigenous knowledge; Educational theory; Sustainable development;

Introduction

The recognition of the importance of education as a critical tool for development is not only widespread but it is both international and unquestionable.

Investment in education has traditionally been justified by optimistic assumptions, the first being that an educated population contributes to the socio-economic development of the society as a whole, and the second, that education contributes to the well-being of individuals within the society (Fagerlind and Saha, 1989, p.3).

Much earlier, literacy has been fingered as one of those typologies of basic education that has the potential of raising both the productivity of new literates and that of those working in association with any group of new literates (Anderson, 1966; Blaugh, 1966). Respectable international organizations such the World Bank and the United Nations recommend education as a tool both for poverty alleviation and for the promotion of social development as education is said to equip with the right skills, engender the right attitudes and produce the needed knowledge for facing major life challenges (World Bank, 2009; UN, 1948). Of late, human capital theorists submit that the human being is able to enjoy enhanced value and a higher status among the created beings, only as a result of the transformation s/he is able to bring about within himself/herself through education (Oxal, 1997).

However, if the world is unanimous in regards to the advantages and rewards of education, a similar complete agreement is not available when the issue concerns the nature and contents of education. In other words, while everyone agrees that education is a sine qua non for a good and successful life, there is yet to be agreement on that which should constitute education everywhere.

The meaning of education

Education is both a means and process of transmitting the knowledge and civilization of a society to present and future generations with the view to facilitating the continuity of the said society.

In the ongoing evolution of humanity, civilizations and the cultures they produce are judged by two relative standards, relative in the sense that the standards arise out of human value preferences. One standard is the breadth and depth of the intangible substance of these cultures that survives their material acquisitions. This includes the arts, philosophies, faiths, sciences, morals, manners, and other refinements with which each culture is identified. The other standard is the extent and depth of the contributions these refinements make in the lives of those to whom they are bequeathed. Education in the broadest sense is not only the art that awakens and cultivates these refinements within each society in each individual according to his gifts and opportunities, but it is also the skills that help transmit, preserve

and further cultivate them in the experiences of those who inherit them (Nakosteen, 1974, p.9) .

Education then tends to serve the society that gave birth to it. Not only does it serve as an instrument and process for awakening the desired qualities in the individuals making up the society, it serves also as a channel for the perpetual transmission to all generations, of the values that the society holds dear.

However, education carries out these roles and others within pretty diverse perspectives. These varying perspectives are captured by existing theories of education. The major among these theories include the functionalist, conflict, critical education, pragmatic, and afrocentric theories of education.

The functionalist theory

The functionalist theorists view education as an institution of socialization that drills learners on various societal roles such as how to get along with others as well as prepare them for adult roles. Within this school of thought, education helps students learn rules and norms of the society particularly conformity to law and respect for authority in ways that breed a docile people who, in many ways become content with their subordinate or master-serving roles. Cowburn (1986, p.105) reveals that subordination has to be taught: “it is not something which is simply there, a happy occupation of one’s place in society is not automatic – the incumbent has to be educated for it”.

Thus, education may be employed for pre-determined purposes such as for molding docile human beings (Cowburn, 1986), for making rebellious or anti-establishment individuals (Psacharopoulos, 1980) or making learners aspire towards social mobility through specific educational channels (Fagerlind and Saha, 1989).

The Conflict theory

Conversely, conflict theorists opine that education reinforces and perpetuates social inequalities based on class, gender, race or ethnicity. Generally, they view education from a negative perspective; they particularly posit that opportunities for acquiring quality education are largely determined by factors other than one’s academic ability. In this respect, education serves to preserve the status quo while encouraging students to participate and compete on the assumption that they are competing on level terms. Cowburn (1986) comments that education, as a [state] provided system of instruction enters history’s stage, first and foremost, as a weapon of one class to be used against another. As a result, the dominant class has to craft an education system that would only teach the working class to know its place in society and adapt to it. This is a kind of controlled education designed to counter revolutionary doctrines and serve the interests of the bourgeoisie. Freire, (1985) opines that it would be extremely naïve to expect the dominant classes to develop a type of education that would enable subordinates classes to perceive social injustices critically.

Specifically, education legitimizes inequalities under the guise of meritocracy whereupon cultural ability weighs more than natural intelligence. In this respect, conflict theorists argue that education molds students from lower social classes to accept and retain their social status as members of the lower social classes. Whilst the theorists are not entirely for a total rejection of education, they are nonetheless critical of the capitalist model of education. Essentially they argue that,

Education is a tool of the capitalist state, operates to maintain the status quo, enabling those in power to reinforce their privileged position and deprives those not in power, either by socialization into a passive role...(Fagerlind and Saha, 1989, p.58).

In many respects, learners from wealthy families have inbuilt advantages. Their mere social status means that they are already ahead of the rest of the learners even before the race has started. This cultural capital helps learners from upper social classes to navigate challenges such that those with dominant cultures benefit more than those who have to struggle to identify with what may seem as foreign cultures.

Conflict theorists cite the case of tracking, a formal system where learners with similar learning difficulties or needs are sorted and grouped together with the belief that they will enjoy specialized attention from their assigned teachers, as an arrangement that leads to self-fulfilling prophecies in

which learners remain content with their low self-worth (Education Week, 2004).

The critical education theory

The critical education theory has its roots in the neo-Marxist ideology (Giroux, 1983). Critical educational theory sees school as an enterprise that is not neutral as it only espouses the views and lifestyle of the mainstream. According to Apple (1993), contrary to the claim that education increases possibilities for individual development, the main function of education is the reproduction of the dominant ideology. The rural training centers in Botswana for instance, instead of promoting local knowledge, promote Western ideas (which are dominant) without relating them to what the local people have been practicing. Formal education in this regard is seen as disempowering the already disadvantaged people in communities and empowering the affluent.

This argument applies well to the situation in Botswana. For example, the Botswana rural training centers cater for local farmers who are mostly poor farmers who make a living mostly out of subsistence farming. Relying only on modern knowledge makes the rural training institutions' efforts ineffective because farmers are unable to utilize whatever knowledge they get from the training. For instance, Gboku *et al.* (2008) discovered that after going through the training, farmers do not use the supposedly new knowledge they acquired because it was either too complicated or expensive to use. For example, it was revealed that it is easy and far cheaper to use Motswere (a local tree which is burnt and the ash is sprinkled on seeds for preservation) powder for seed preservation than complicated scientific pest control techniques (p.104).

According to Aronowitz & Giroux (1993) Critical educational theory also argues that schools or modern learning occupies an important but paradoxical place between daily experiences and dreams for the future which can be translated as alienating people from their culture and environment. Perhaps the reason why most farmers do not practice what they have been taught at the rural training centers is that they do not want to be dragged out of their culture and into a Western culture which makes up the core of the curriculum content. The curriculum content does not seek to complement existing farmers' information and practices but somewhat radically delivers new knowledge and practices that fail to acknowledge the existence of the local knowledge. This might be one of the reasons why rural training centers have failed to make a significant impact on rural farming.

The pragmatic education theory

John Dewey (1859-1952) is credited with the birth of the pragmatic theory of education (Neill, 2005). Dewey's submission that "education is life itself" emphasized the utilitarian attribute of education. Instrumentalist education, as Dewey's theory of education was also known, is expected to impact the conduct of the learner to such an extent that s/he is able to reproduce this impact in a material or pragmatic way.

However, the pragmatic educational theory emphasizes the fact that all conduct, action and behavior that may have been activated by education is expected to be operationalized within acceptable social precincts. Thus,

Our efforts to survive, to seek pleasure, to find meaning, and to be social, are facts of social existence. The ways we survive or fail to do so, the ways we find pleasure or fail to do so, the nature of the meanings we find, the quality of our social existence: these are what need to be found out, and the means by which we take action in finding them, together with the outcomes gained, constitute the very meanings that are brought into existence "through education" (Chambliss, 1987, p.127).

The Afrocentric theory of education

The Afrocentric educational theorists are thinkers that conduct all discourses on Africa from the center of African consciousness. They are individuals who have lived directly or in a vicarious sense, the profound experiences of Africa. Subsequently, these individuals have reflected on their own and

others' experiences and have evolved theories that derive their rationale and force from the center of African world view.

Afrocentric theorists hold that Africa possesses its own peculiar body of knowledge. This body of knowledge was accumulated through centuries and it was and continues to be derived from Africans' view of the world (Ayittey, 2008; Asante, 1995; Ocitti, 1988). Over time, this corpus has organized itself into systems of knowledge addressing specific aspects of African life such as technology, health, agriculture, and crafts to cite but a few. Consequently, this body of knowledge has come to be referred to as African Traditional Knowledge Systems (TKS) or Indigenous Knowledge Systems (IKS) or Indigenous Knowledge (IK).

Education, (that is, that which can be taught, the methods for teaching that which can be taught, those potentially responsible for the eventual teaching, etc.), is one of the systems making up the African Traditional Knowledge Systems (Omolewa, 2007; Ajayi, 1998).

Education within the context of Africa

Africa may be said to demonstrate three main phases of existence, namely, the pre-historical phase and the historical phase within which the colonial historical phase makes a significant and important dovetail. The pre-historical phase is that phase of the black continent's existence for which written records took time to be made. Although oral records abound on this phase of the continent's existence, these oral records are just about now being transcribed into written records to feel the gap left in the books on the History of the World within which Africa is either erroneously or maliciously described as "ibi sunt leones", meaning 'here be lions' or as great empty spaces largely marginal and subordinate" (Ki-Zerbo, 1995 p.1). The historical phase of Africa is that phase during which records of facts and fables were able to be taken down in written forms. Little was known about Africa by Europe before the 16th and 19th centuries; consequently initial interactions between Europe and Africa gave rise to a lot of misinterpretations and discoveries. For example, "The discovery of Ife's now famous naturalistic bronzes, terracotta, and stone sculptures challenged European assumptions about the nature of African art and initiated significant debates concerning the antiquity of its past" (Department of Arts of Africa, Oceania, and the Americas (DAAOA), 2000).

However, if the historical phase of Africa was a difficult one that has generated volumes of controversial stories about Africa, this phase harbored within its womb two contiguous and even more difficult eras whose experiences remain painfully indelible within the consciousness of Africans till date. Those more difficult phases are known as the slave trade period and the colonial era and they jointly constitute, within the context of this discussion, the third phase of African continent's existence.

While records predating the slave trade and colonial history of Africa indicate that Traditional African Education (TAE) is the type of education that is endogenous to Africa (Ki-Zerbo, 1995; Ajayi, Goma and Johnson, 1996), the colonial experience has come to alter this endogenous education so deeply that it became as good as having been abolished and annihilated. Traditional African Education got supplanted by Western education and during and after the colonial period, Western education began and continued to be practiced within the cities and large agglomerations of Africa which by the way has itself become modern Africa as distinct from traditional Africa.

However, the practice of Western education has not been smooth sailing. The nearly two centuries of the practice of Western education has been greeted by sporadic calls for, and actual educational reforms in Africa (Kupferman, 2013; Mignanwande, 2012; Assie-Lumumba, 2006; Adick, 1998) because it has been found that while Western education has served to globalize Africa, its processes and contents suffer from partial incongruity with African realities when thoughtlessly operationalized within the African environment.

Even educational statistics bear witness to the fact that Western education does not serve Africa as well as it does Western nations. For example, while an average of 96% of children in Western societies are enrolled in schools (Organization for Economic Cooperation and Development (OECD), 2012), about 50% of African children of school age are not able to secure placement in primary schools (UNESCO, 2011). Additionally, while an average of 62% of qualified candidates in OECD countries get placement in universities (OECD, 2012) the gross enrolment for tertiary education in Africa stands at

a paltry 7% (Tilak, 2009).

This situation brings to the fore, the question pertaining to the role of education within human society. Specifically, what basic benefit are nations expected to deliver through education? What critical mass of the national population is expected to attain education for the expected benefit from education to be manifest? The basic benefit nations are expected to deliver through education is development within the mental, economic and ecological realms. As observed from nations with fully developed Western education system, an average of 80% of the population is expected to benefit from basic education and about 40% of the population is expected to benefit from tertiary education before any meaningful social development may be derived.

Currently, Africa is far away from these targets. Yet, Western education has been around Africa for about two centuries. If after two hundred years, Western education has not been able to deliver the desired level of development, it might be that Africa is yet to be pragmatic in its choice of educational model. Indeed it has been long suspected that an aspect of the functionalist theory of education has been deliberately promoted within Africa over these centuries wherein the interests of Western nations are protected in Africa through the promotion of an education that is not rooted in African realities (Kupferman, 2013; Occiti, 1988).

How difficult it is to disagree with the proponents of the educational conspiracy and functionalist theories when it is known that a people learn better and most efficiently when learning is organized to progress from the known to the unknown, yet, African nations, with the assistance of international development partners, have consistently excluded the knowledge familiar to the people (Indigenous Knowledge) from education and have adopted non-homely method of education (the school system) in promoting most of the education on the continent.

Education as tool for sustainable development in Africa

Where the aim of education remains development, and where the process of development is to be driven by the people development is to serve, both the process and methods of education and indeed the content of education must be run in a way that is understood and malleable by the people.

One easy and logical way of establishing an environment such as this, is through the deployment of indigenous knowledge within the current African educational enterprise.

Indigenous knowledge

Indigenous knowledge is the local knowledge that is unique to a culture or society. Indigenous knowledge can also be known as local knowledge, folk knowledge, people's knowledge, traditional wisdom or traditional science (Nakashima *et al*, 2000). For the World Bank (2004), indigenous knowledge implies a large body of knowledge and skills that have been developed outside the formal education system. Indigenous knowledge is passed from generation to generation, usually by word of mouth and cultural rituals, and has been the basis for agriculture, food preparation, health care, education, conservation and the wide range of other activities that sustain a society and its environment in many parts of the world for many centuries. For Africans, indigenous knowledge is not something elusive, as many modernists would argue; rather it is about what local people know and do, and what local communities have known and done for generations (Warren *et al*, 1996). This knowledge was therefore built on experience and not only on theoretical basis. Gorjestani (2005) argues that knowledge is experience and everything else is information. Indigenous knowledge should remind us that knowledge does not only come from books, computers but from the interpretation of our environment (Classen, 1999).

For example, indigenous people have a wide knowledge of the ecosystems in which they live and of ways of using natural resources in a sustainable way. Although, colonial education has tried hard to discountenance this knowledge, current environmental catastrophes in Europe and elsewhere in the world are vindicating possessors of this type of knowledge. However, due to the long neglect suffered by this type of knowledge, much indigenous knowledge is being lost and, along with it, valuable know-how about ways of leading a sustainable life both ecologically and socially. Therefore, the view is canvassed here that the incorporation of indigenous

knowledge in the school and training curricula throughout Africa will not only strengthen the effectiveness of the rural training curricula but will also empower the farmers and supplement the knowledge currently taught the young ones in our schools. According to Gorjestani (2000), utilizing indigenous knowledge helps to increase the sustainability of development efforts because the indigenous knowledge integration process provides for mutual learning and adaptation which in-turn contribute to the empowerment of local communities. Empowerment of local communities cannot be over-emphasized because each and every development effort is meant to empower communities especially the poor who particularly consider indigenous knowledge as the only asset they control and certainly one with which they are very familiar with (Gorjestani, 2000). Therefore, the philosophy of teaching/developing people 'from the known-to- the unknown' will go a long way in helping farmers and rural dwellers to relate easily with the training that is offered in rural training centers throughout Africa. Also the curriculum will be responsive to the needs of rural people.

Indigenous knowledge is usually passed from one generation to the other through words of mouth, song, dance, rituals and practice. Ellen & Harris (1996, p.45) succinctly put it when they said "indigenous knowledge is orally transmitted or transmitted through imitation and demonstration". This knowledge transmission was usually done within informal settings and was done formally only in a few occasions e.g. during initiation schools, during formal marriage meetings. Also, the knowledge was constantly reinforced by experience and trial and error. In fact Warren *et al* (1996, p.32) highlighted that "For Africans, indigenous knowledge is not something elusive, as many modernists would argue; rather it is about what local people know and do, and what local communities have known and done for generations- practices- that developed through trial and error and proved flexible enough to cope with change". This supports the effectiveness of passing on indigenous knowledge to the next generation or to the learner; it did not only rely on theories, experience was upheld. This is further supported by the views of Gorjestani (2005) when he echoed that knowledge is experience and everything else is information. He is arguing for knowledge that has been built on experience and not only on theoretical basis.

Application of Indigenous Knowledge

One issue that the request for the introduction of Indigenous knowledge may throw up is the place to carve for it within the present system of education in Africa. One immediate area, indigenous knowledge may be profitably deployed is in the area of rural education/development or community development. According to Gorjestani (2005):

Indigenous knowledge is used at the local level by communities as the basis for decisions pertaining to food security, human and animal health, education, natural resources management, and other vital activities. Indigenous knowledge is the key element of the social capital of the poor and constitutes their main assets in their effort to gain control of their own lives. For these reasons, the potential contributions of indigenous knowledge to locally managed sustainable and cost-effective survival strategies should be promoted in the development process. Indigenous institutions, indigenous appropriate technology, and low-cost approaches can increase the efficiency of development programs because indigenous knowledge is a locally owned and managed resource (http://www.unctad.org/trade_env/test1/meetings/tk2/worldbank.pdf).

People in different locations develop ways or means of survival depending on the environment they live in and the experiences they have. Such was the case of North Africans who have been successful with Traditional Water and Wastewater Management Techniques. Their success proved that:

Utilizing ecologically sensitive indigenous and alternative methods for wastewater disposal and treatment can help achieve two important pre-requisites for sustainability: lessening the financial burden on municipalities that rarely have the means to apply conventional methods; and respecting local ecosystems... (<http://www.gdnet.ws/pdf/neamatalla.pdf>)

It equally proved that successful approaches to local and national development may be derived "from traditional know-how developed over centuries of adaptation to arid conditions that is on the verge of disappearing..." (<http://www.gdnet.ws/pdf/neamatalla.pdf>)

Indigenous knowledge therefore is an important resource and it needs to be protected, further developed, emphasized, and more importantly sustained. The local people, more especially those in the rural areas, are knowledgeable on how to make a living and how to solve the problems they encounter in life through indigenous processes. Through teaching and indigenous knowledge oriented researches, the potentials of indigenous knowledges can be fully harnessed for the benefit of rural dwellers and national development within the context of Africa (Biao, 2011).

Recommendations

In line with the demonstrated usefulness of indigenous knowledge within the context of African development, it is here recommended that

- More researches should be commissioned that will unearth greater values of indigenous knowledge systems.
- The acquisition of indigenous knowledge should be promoted among both rural and urban dwellers and among the young and the old within Africa and its incorporation into the formal curriculum.
- African indigenous knowledge being an aspect of African corpus, and the acquisition of African corpus being usually promoted within the non-formal education environment, infrastructure should be put in place for the promotion of indigenous knowledge to be carried out through the non-formal education process most of the time.

Conclusion

This paper has argued that the world is unanimous in regards to the advantages and rewards of education. However, the bone of contention lies in what should constitute education everywhere. Of fundamental importance is that education as a tool for sustainable development should be delivered in such a way that it is understood and malleable by its user, hence the authors' call for a revalorization of indigenous knowledge.

Although indigenous knowledge has been relegated to the background for a long time, its worth is gradually being appreciated not only by African intellectuals but also by persons who have worked hard in the past to annihilate this system of knowledge. The time has therefore come for African intellectuals to promote investigations in this area of knowledge with the view to unraveling both the beauties and usefulness of indigenous knowledge even within modern times.

During this process of revamping and revitalization of indigenous knowledge, all temptation at westernizing indigenous knowledge through excessive formalization of its processes should be resisted.

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