

SUSTAINABILITY IN SOUTHEAST NIGERIA THROUGH INDEGENOUS
ENVIRONMENTAL EDUCATION

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Abstract

This dissertation aims to illuminate why Indigenous Knowledge is declining in Igbo land, southeastern Nigeria, and the possibilities of using Indigenous Environmental Education to re-generate Igbo Indigenous Knowledge. The research, focusing on both Nigerian Igbo and diasporic Igbo, has the potential to add nuance and complexity to the discussion of Indigenous Knowledge in the context of Igbo people. This study is motivated by the research question “why is Igbo Indigenous knowledge declining and how has this decline impacted on Igbo language preservation, socio-cultural and ecological sustainability of Igbo people”? In exploring this fundamental question, I argue that a culturally based Indigenous environmental education rooted in Igbo language instruction may assist in preserving Igbo Indigenous knowledge, and local ecological resources. Drawing on postcolonial theory, decolonization and critical pedagogy as theoretical frames, I argue that these approaches interrogate Eurocentric dominant views, rooted in colonialism, that misrepresent and undermine African Indigenous knowledge. This dissertation also offers insight into how a persistent colonial mentality, continues to undermine Igbo worldviews. In conducting this research, I employ Indigenous Methodologies, involving Indigenous approaches to epistemology – stories and personal narratives. These are supplemented with interviews and document analysis. Since Igbo are well-dispersed people, the research design also considers Igbo Diaspora in Toronto to illustrate the effect of locatedness and the influence of a westernized environment on Igbo language and Indigenous Knowledge preservation. The findings from the research suggests that complementary epistemology, through a creative integration of Igbo Indigenous Knowledge and Western epistemic approaches in the school curriculum, presents a

viable means of preserving Igbo Indigenous knowledge. Findings further suggest that Igbo youths are interested in Igbo Indigenous knowledge, nevertheless, society's inability to transfer Indigenous knowledge and widespread western influences presents challenges to the preservation of Indigenous knowledge. Ultimately we must consider how to incorporate Igbo and other Indigenous knowledges, into the educational system so that the low-status accorded to them may be reversed. In the Igbo case, I argue, this warrants an epistemological approach grounded in Igbo language instruction and knowledge of the local environment.

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Chapter One: Introduction

I visit the memories of my childhood interactions with the local environment and culture to contextualize the endangerment of Igbo Indigenous culture and degradation of the local environment. As a child, I found the rivers, streams, forests and farmlands provided endless avenues for exploration. For example, as a ten-year-old, I would go mushroom picking in the village forests with other children my age. Since I was not based in the village, my cousins would guide me in the forests, and I remember being envious of their familiarity with the terrain. Depending on the season, one could pick huge mushrooms with an umbrella circumference of about 30-35 cm. The edible wild fruits, the native birds and the serenity of the natural environment continue to be unforgettable childhood memories. During evenings in the dry season, children play moonlight games, and the grandmothers tell stories and folklores. Sadly, the traditional institutions that flourished alongside Indigenous culture have declined, and also natural environments such as forests, streams and rivers that once helped children gain experiential knowledge of their environment and Indigenous culture barely exists. For instance, most streams that flowed in my childhood are now stagnant waters. Indigenous local trees, with economic as well as cultural and social benefits, are endangered. Forests used to be thick with edible wild fruits and farmlands are now wastelands, made useless by the practices of the development imperative.

As a matter of fact, the loss of biodiversity and environmental degradation in this region is frightening. Two specific examples are the endangered *shekeleke*, a white, low-flying Indigenous bird that once dotted the sky, and the extinct *ubenna* and *ununna*, which were wild, Indigenous rainforest shrubs that produced delicious grape-like fruits.

The escalation of unsustainable lifestyles in Southeast Nigeria has compounded these ecological problems. In fact, the ecological health and well-being of Southeast Nigeria are in serious jeopardy if an urgent remedy is not applied.

For this reason, the decline in Igbo Indigenous knowledge and local environment is of paramount concern to Igbos of Southeast Nigeria. In fact, I argue that the decline in Igbo Indigenous Knowledge and local environment has also impacted on the flourishing of the mother tongue (Igbo language) because Indigenous language is learned through interactions and immersion with the cultural, social and ecological milieu of a society. This decline did not happen all of a sudden, but has taken place over the course of time, mainly as a result of processes of colonization, which continue to have an impact on colonized peoples around the world (Shava, 2011) via Western ideologies. Colonization in Africa introduced modern Western knowledge systems, which repudiated Indigenous knowledge systems, invalidating, marginalizing, devaluing, decontextualizing, misrepresenting and excluding them (Dei et al., 2002; Hoppers, 2001, 2002; Hountonji, 1997; Masuku van Damme and Neluvhalani, 2004; Smith, 1999; Shava, 2011). Because of their misrepresentation, Indigenous knowledge systems were perceived as primitive; not only by the colonizers, but by the Indigenous people themselves as a result of brainwashing, assimilation and acculturation (Dei et al., 2002). The Igbo of Southeast Nigeria are among the most Westernized peoples in sub-Saharan Africa, quick to abandon their traditional ways of knowing (Onwubu, 1975). This tendency to imbibe Western ways of doing things has far-reaching consequences in the social, ecological and cultural life of the Igbo of Southeast Nigeria.

Many observers have argued that the 20th century witnessed a significant degradation of African environments (Maddox, 2006). Consequently, to fuel the resource utilization/management agendas of foreign and local interests, forests have been cleared for timber and transformed into agricultural land. African wildlife, including the largest number of wild animals in the world, has suffered from subsistence and commercial hunting and a significant loss of habitats and biodiversity.

Deplorably, the combination of the effects of modernization, with its development imperative, the effects of colonialism, and capitalism have accelerated ecological, socio-cultural and economic changes in Africa's environment. In fact, the collectivist cultural tradition that is the thread that binds the Igbo together seems to be broken, due to pervasive Western influences and ideologies that have swept the region like a tsunami. The traditional agrarian-based system, which produces less waste, is no longer attainable under these circumstances. Traditional ways of food preservation are no longer used because Indigenous knowledge systems and resources that support such skills have declined (Anoliefo, Isikhuemhen and Ochije, 2003; Akpabio, 2006). For instance, the use of *ngiga*, a device hung over fire, allowing products to be preserved for several years is no longer used. Indigenous broad leaves used for wrapping food products are also threatened. Traditional farming practices such as avoidance of clear-cutting of vegetation and shifting cultivation that allowed soil to regain its fertility are no longer attainable.

With the portrayal of the consequences of modernization and capitalist ideologies in Igbo land, I argue that the decline of Igbo Indigenous knowledge and language are among one of the reasons why the region has witnessed such widespread environmental degradation and related socio-cultural problems, and I suggest that problems of this

nature are complex socio-cultural problems. Hence, the aim of this research is to preserve Igbo Indigenous knowledge and increase awareness and interest in the knowledge system through culturally-based Indigenous environmental education. I hope this consciousness will help Igbos regenerate their Indigenous knowledge (IK), which has sustained their lives for centuries, and if possible, help them question or reject those aspects of the ideologies (as explored later in this dissertation) that subvert Igbo Indigenous knowledge and culture. Therefore, this Indigenous research is situated on the cusp of postcolonial theory, decolonization and critical pedagogy. These theoretical schools, like Indigenous knowledge, interrogate dominant Western worldviews that undermine other cultural perspectives. In Chapter Two (Theoretical Framework and Literature Review), I will provide a detailed exploration of how these theories intersect and overlaps with Indigenous knowledge, and where they might deviate.

At this point, I now connect the decline of Igbo Indigenous knowledge and ecological resources to poverty.

Poverty, population growth and management impact on Indigenous sustainability

The Southeast region of Nigeria is said to have the highest population density in all of Nigeria (Chukwuezi, 2001; Onwubu, 1975; Roma, 2008). Traditionally, the Igbo are subsistence farmers, who cultivate on fragmented land using shifting cultivation or land rotation. Land is owned individually or communally. Members of a community share the resources of the community's forests. As populations continue to grow, human dwellings encroach into forests and farm-lands, which have led to the decline of Indigenous resources and the loss of natural habitats. This loss has no doubt had an impact on the

ecological sustainability of the Igbo environment. Many local species, such as Indigenous cash crops, medicinal shrubs and native birds that used to be ubiquitous some decades ago, are now very rarely sighted due to deforestation occasioned by high population growth, poverty and modern capitalist development practices that conflict with Igbo Indigenous ways and local resource management. I contend that when Indigenous resources are depleted, Indigenous knowledge that sustain these resources become irrelevant and obsolete and soon the knowledge will no longer exist in the memory of the people.

According to Chokor (2004), poverty induces negative and unsustainable natural resource exploitation practices resulting in environmental degradation. However, Chokor (2004) argues that affluent Western nations that indulge in over-consumption are not exonerated. Correspondingly, the Indigenous culture, for example, the Igbo society that has adopted Western profligacy associated to capitalist consumerism, deepens these problems. It is crucial to make the distinction that just as poverty leads to the exploitation and degradation of the African environment; affluence and over-consumption in Western nations have a more devastating environmental impact worldwide. I am only digressing here in order to examine the other side of the coin. As Chokor (2004, p. 306) writes:

The orthodox view that poverty causes environmental degradation and wealth cures it is countered by more recent insights which indicate that both wealth and over-consumption put considerable pressures on natural resources and are largely accountable for environmental degradation which the poor are made to bear.

Chokor (2004) also argues that the value placed on natural areas such as forests by poor rural Nigerian natives has nothing to do with valuing nature for its own sake and intrinsic value (unlike in affluent Western societies), but rather nature is valued for its potential as

a source of food. It is not that many ‘poor’ Africans do not value nature; rather, in the context of poverty, forests are seen as a potential source of food and energy (firewood) to satisfy their essential needs, this relation precedence over the aesthetic value of nature.

For instance, local villagers hunt rats, rabbits and squirrels, which serve as their source of proteins. It is not that these local villagers do not want to preserve these animals, but the fact remains that the basic human need for food has to be met first before one can think of preserving nature for ethical or aesthetic purposes. However, as pointed out early on in this chapter, Indigenous practices and customs regulate these practices and protect sustainable use of resources.

Poor environmental management and planning have also contributed to the depletion of Indigenous resources and the decline of the Indigenous local environment.

Poor leadership and corruption continue to undermine poverty alleviation in Africa, I believe that most African communities acknowledge the central role that poverty reduction, family planning, education and capacity building, effective conservation programs and employment opportunities play in sustainable development.

I offer a brief geographical and historical account of Southeast Nigeria, the location of this research and the homeland of the Igbo, to help the reader understand the background of this study.

Geographical/Historical background of Igbo land

Igbo land is geographically located east of River Niger; however, there are some Igbo speaking people, popularly known as the “Anioma” people (an identity coined by Chief Denise Osadebey, the premier of Midwestern Nigeria, colonial Nigeria), located in

Nigeria's Midwestern region. The Igbos are surrounded by other ethnic groups, such as the Ijaw, Ogoni, Ibibio, Bini, Igala, and others. Some of these ethnic groups were formerly in the eastern region of Nigeria with the Igbos before they were carved into the south-south region, for political reasons (Ikpeze, 2000). Nigeria is divided into six geopolitical zones, including the Southeast region, the homeland of the Igbos (refer to Igbo map - figure 1).



FIGURE 1: Map of Nigeria delineating south eastern Nigeria.

The white area is the area formerly known as the Biafra region, but now consists of two geopolitical zones – south-south and south-east. This research is limited to the south-east, which is the Igbo-speaking region in Nigeria. Though, there are many Igbo-speaking people in the south-south region as well. The data for this study is gathered from three local governments in Owerri and one local government in Uguta. (Source: Google Images 2014)

The Igbo people, also referred to as the Ibo, speak Igbo with various dialects. The word Igbo is used in three senses, to describe speakers of the language, Igbo territory and the language itself (see Afigbo, 1981; Shaw, 1970). The Igbo states in Southeast Nigeria include Abia, Anambra, Eboni, Enugu, and Imo; although most parts of the Delta and River states are also Igbo speaking. Today, a majority of Igbo speak English alongside

Igbo as a result of British colonization. In fact, hardly any Igbo speak Igbo without mixing it with English.

The Igbo are the most mobile people in Africa (Ojukwu, 2009; Mgbefulu, 2003); they have migrated within Africa, as well as outside Africa. Migration has increased even more since the Nigeria-Biafra War ended in 1970. Before British colonialism, the traditional Igbo political system of government was more like a republic without a centralized government. Various clans or villages were organized according to clan lineage and village affiliations with a council of elders and title holders administering the affairs of the people. The most powerful decision-making body is the “Umunna” made up of all the males in a patrilineal line from the same ancestral lineage. The Umunna is the most important structure in traditional Igbo society and it underwent significant changes under British colonialism in the 19th century (Afigbo, 1981). The British introduced Eze (kings) known as “warrant chiefs” in most communities. Following the Igbo encounter with the British in the 1870s, Igbo society embraced Christianity and Western education. British rule, thus, brought about significant cultural changes and the introduction of Western worldviews into Igbo society. Chinua Achebe’s *Things Fall Apart* (1958) portrays Igbo culture and its encounter with Western civilization very accurately.

The Nigerian Civil War, also known as the Nigeria-Biafra War, which is central to Igbo history and identity, ended in 1970. The Igbos, ravaged, vanquished and impoverished by war and lacking jobs and infrastructure, emigrated away from their traditional Igbo homeland in Southeast Nigeria in search of work in other parts of Nigeria, and many dispersed to Western parts of the world, including Canada, the United

States and Britain, and virtually all over the world. It is important to point out that the emigration of the Igbos to other parts of Nigeria did not start with the end of the civil war. In fact, Igbos have large migrant communities in Northern Nigeria and Western region of Nigeria that existed several decades before Nigeria independence, and of course the civil war (Van Den Bersselaar, 2005). However, I would argue that the dispersal of the Igbos intensified after the civil war because of the reasons mentioned above. These dispersed Igbos are now regarded as the Igbo diaspora. For instance, the Toronto I live in boasts of about ten thousand Igbos in the whole of the Greater Toronto Area (Igbo Union of Canada - estimation, 2012).

Igbo ethnic identity has existed and persisted in pre-colonial, colonial and post-colonial Nigeria (Shaw, 1970). During the colonial era and up to the Nigeria-Biafra War, there was pan-Igbo cultural cum socio-political organization known as Igbo Union (Van Den Bersselaar, 2005). Today such organization is defunct, partly because the Igbos are no longer united like they were in the pre-civil war era. The Igbo Union has been replaced by a somewhat similar organization, known as Ohanaeze Ndi Igbo. This new organization is committed to the socio-cultural and political development of *Ndi Igbo*, the Igbo nation in Nigeria. Though the politics of Igbo unity lies outside the scope of this dissertation, it is important to note that the Igbo language is the unifying element of identity amongst the Igbo people in this vast geographic area in Nigeria.

Due to the vastness of the area inhabited by the Igbos, this study focuses upon the communities around Owerri, in Imo state. Imo state covers an area of roughly 5,100 km². The annual rainfall in this region varies from 1,500 mm to 2,200 mm (Okonkwo and Mbajiorgu, 2010). Due to heavy seasonal rainfall, the region has suffered a great deal of

environmental damage, mainly related to erosion, which has also destroyed houses, roads and farmlands (Akpokodje, Tse and Ekeocha, 2010; Igbokwe, Akinyede, Dang, Alaga, Ono, Nnodu and Anike, 2008; Ajaero and Mozie, 2010; Anoliefo, Isikhuemhen and Ochije, 2003). With a high population density, leading to over-farming and deforestation, the soil has been degraded and much of the native vegetation and animal life has disappeared or is endangered (Anoliefo, Isikhuemhen and Okolo, 1999). As a result, the federal government of Nigeria has declared Southeast Nigeria an ecological disaster zone¹.

In this dissertation, I explore the decline or loss of Igbo Indigenous knowledge and the possibility of revitalizing the knowledge system through a culturally-based Indigenous environmental education. This work also considers the relationship between Indigenous knowledge and Western worldview, and how colonization has impacted Igbo Indigenous knowledge and language (mother tongue), socio-cultural and ecological sustainability of Igbo society and the broader context of environmental degradation in Southeast Nigeria. I narrow my research to the cultural, educational and historical context of the problem.

Considering that the Igbo are a dispersed people, I also examine how locatedness (where Igbos live) affects the intergenerational transmission of Igbo Indigenous /

¹ Following environmental degradation and ecological problems in the South eastern Nigeria, the Federal Government has declared the area an ecological disaster zone. The Chairman of the South-East Governors' Forum, Anambra State governor, Mr. Peter Obi led the delegation of Eastern Governors to a meeting with the Federal government. At this meeting, Obi lamented the devastating effects of erosion in the region. Published in Guardian Nigeria (2008). Also Chiakwelu (2009) wrote about the ecological disaster confronting southeastern Nigeria and Peter Obi led delegation to discuss this problem with the federal government (Nigeria World, 2009).

traditional knowledge through a comparative study of the homeland Igbo and the diasporic Igbo in Toronto.

From my experience in the Igbo community in Toronto and in Nigeria, I can infer that the loss or decline of Igbo Indigenous knowledge (IK) and language is a serious concern to many, irrespective of where one resides. Therefore, a study of such decline that does not juxtapose homeland experiences with diasporic experiences is necessarily incomplete. On that assumption, my dissertation seeks to renew interest in Igbo Indigenous knowledge by exploring Indigenous environmental education possibilities that can benefit both groups. On a personal level, I am aware that the Igbo diaspora is interested in passing Igbo Indigenous knowledge, language and culture on to their children. As a parent residing in Toronto with four young children, I am burdened by the dilemma of inability of my children to understand or speak Igbo, our native language. It means that my Igbo language and cultural identity ends with my generation, hence, that is why locatedness matters in the transmission and loss of Indigenous knowledge and culture in relation to the Igbo diaspora in the Canadian context. By studying the Igbo diaspora in Toronto, caught up in linguistic, cultural and epistemic dilemmas, I also consider the results of being removed from one's Indigenous knowledge and immersed in mainstream Western culture.

The central question in this dissertation is: Why are Igbo Indigenous knowledge and language declining and what are the possibilities of regenerating declining Igbo Indigenous knowledge/language through a culturally-based Indigenous environmental education program for the homeland and the diaspora? Does such education hold any potential for diasporic Igbos considering the (western) social environment in which they

are immersed? Is the homeland free from any constraining factor? When proposing a culturally-based transformative Indigenous environmental education as a means to resuscitate Igbo Indigenous ways of thought and to contribute to greater care for the local environment, I had Edmund O’Sullivan’s (1999) inspiring book in mind titled *Transformative Learning: Educational vision for the 21st century*, in which the author envisioned transformative education as a form of learning that would fundamentally change our world today to a sustainable planet. This vision posits a “radical restructuring of all current educational directions” and “makes the choice for a sustainable planetary habitat of interdependent life forms over and against the dysfunctional calling of the global competitive marketplace” (O’Sullivan, 1999, p. 2). According to O’Sullivan (1999, p. Xii), this vision has always existed among the Indigenous peoples of the world, in a context where they view “themselves as members of a great family of the universe with all its components.” I try to view this research in that context – to radically revitalize Igbo Indigenous knowledge for the sustainability of the local environment.

While trying to understand the research problem, I conducted twelve interviews² with twelve participants. Nine of the participants were from the homeland, while three of the participants live in diaspora (Toronto). Interviews were supplemented by document analysis (archives on Igbo culture and Indigenous knowledge, courtesy of Imo State Ministry of Culture), field notes based on my observation of students at the Igbo language school in Toronto, and personal narratives and autobiographic experience. A detailed explanation of the research procedure is provided in Chapter 5 – Methodology.

² This research received York University ethics approval for research involving human subjects.

Definition of terms

This dissertation mainly explores the interplay of two concepts: Indigenous knowledge (IK) and (culturally-based) environmental education. In order to have a preliminary insight into the problem I am exploring here, I present some working statements on the meanings of these terms.

Indigenous knowledge

The term Indigenous Knowledge has been used interchangeably with Indigenous ecological knowledge, traditional knowledge, traditional ecological knowledge (TEK) and non-Western knowledge; each qualifier may refer to a different aspect of its core meaning³ (Reid et al, 2002). However, I use the term Indigenous knowledge (IK) because it is encompassing and suitable for this work. More often than not, the definition and meaning are usually conceptualized by outsiders, notably Western scholars and anthropologists/ethnographers (Reid et al., 2002; McGregor, 2004; Simpson, 2004). It is only recently that insider scholars (that is, Indigenous academics) have begun to analyze, modify, or even reject these definitions. Their examination or outright repudiation of these externally assigned meanings and definitions may be at least partially attributed to the rise of postcolonial literatures, encouraging alternative narratives. IK is associated with the diversity of knowledge, innovation and practices that Indigenous culture and communities have with respect to the biosphere and the socio-economic and cultural-historical aspects of their local environments (Reid et al., 2002). Shava (2011) avoids

³ **Notes** – Throughout this dissertation, Indigenous knowledge and Traditional knowledge are written interchangeably. Also, Indigenous knowledge is sometimes abbreviated as IK, especially in Chapter 6.

assigning a “concise and prescriptive” definition of Indigenous knowledge because of its contextual variability. However, he notes that the definition of IK should incorporate key concepts such as “people, context (place and time), culture, language, knowledge, and practices, and dynamism” (p. 2). IK is often seen as antithetical to Western or modern scientific conceptions of knowledge, yet some philosophers of science are of the view that there is not that much disparity between Indigenous methodology and Western scientific methodology.

From the Igbo perspective, Indigenous knowledge is defined as the knowledge, beliefs, practices and skills transmitted from one generation to the other through cultural practices expressed in language, dance, songs, folklore and interactions within cultural institutions. Cultural institutions such as age-grades⁴ and masquerades are symbolic cultural practices through which Igbo Indigenous knowledge is transmitted. Also, a significant portion of Igbo Indigenous knowledge is acquired from farming and interaction with the local environment. Thus, the common thread linking all Indigenous knowledge is that it is local and culturally specific and the knowledge is gained through interaction with local ecologies and relationships developed with nature over time (see Reid et al., 2002, p. 115; Berkes, 1993, pp. 1-10; Grenier, 1998; Johnson, 1992; Studley, 1998; Warren, 1991; Usher, 2000).

Environmental Education

Stapp et al. (1969, p. 31) rendered one of the earliest definitions of environmental education as “education aimed at providing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve

² Age grade is an association of people in the same age group.

these problems, and motivated to work toward their solution.” Prior to the Tbilisi Conference, UNESCO (1977) offered this definition:

Environmental education, properly understood, should constitute a comprehensive lifelong education, one responsive to changes in a rapidly changing world. It should prepare the individuals for life through an understanding of the major problems of the contemporary world, and the provision of skills and attributes needed to play a productive role in improving life and protecting the environment with due regard given to ethical values.”

Some have argued that environmental education (EE) emphasizes environmental protection, while education for sustainable development (ESD) puts greater emphasis on citizenship, justice and poverty alleviation. I prefer to be associated with EE rather than ESD because the latter is a mere extension of environmental education (Bourn, 2005; Reid, 2002; Fien, 2004) and seems to perpetuate the commodification of nature and a new kind of eco-technology, which works in the interests of the rich, as argued by Sachs (1993, cited in Huckle and Sterling, 1996, p. 13). Gomez (2005) equally faults ESD by describing it as “heterotopia”, implying that it is a concept plagued with the inclusion of virtually everything, with much utopianism. Based on my reading of the policy literature, ESD is more aligned with liberal environmentalism and has little to contribute towards the preservation of IK. I will leave the contentions between the two concepts to focus instead on the pedagogical benefits of culturally-based Indigenous environmental education pedagogy in Southeast Nigeria. Thus, a culturally-based Indigenous environmental education, as proposed in this study is articulated as an environmental learning program that is relevant to Indigenous socio-cultural context. By that I mean an environmental education pedagogy that draws from Indigenous worldviews as well as respecting and honouring Indigenous epistemological traditions through experiential

interaction with local ecologies. A culturally-based Indigenous environmental education, must however, tackle Indigenous issues such as land resource rights and social justice while also challenging dominant Western views that undermine Indigenous perspectives. I also provide the definitions of additional terms pertinent to this study.

Critical pedagogy

It is hard to articulate a simple and acceptable definition of critical pedagogy, however, it is associated with some of these: Critical pedagogy is essentially committed to the development of a culture of schooling that supports the empowerment of culturally marginalized and economically disenfranchised students (Darder, Baltodano and Torres, 2003). Critical pedagogy holds that all knowledge is created within a historical context and these historical contexts give meaning to human experiences. It asks questions that will help teachers and students to critically evaluate their practice and learning to better understand how dominant culture are embedded in the ‘hidden’ curriculum. Furthermore, critical pedagogy incorporates resistance and counter hegemony to fight the status quo, which privileges certain groups in the society. Counter-hegemony in critical pedagogy ensures that power relationships are reconstructed to make sure that the voices and experiences of those who have been historically marginalized and oppressed are heard. Similarly, Morrell (2002, p. 72) states that “critical pedagogy can help students deconstruct dominant narratives and contend with oppressive practices in hope of achieving a more egalitarian and inclusive society.” Ultimately, critical pedagogy should aspire to help students develop critical literacy so that they can understand the socially constructed meanings embedded in texts as well as the political and economic context

within the texts. It is important to realize that critical pedagogy is action-oriented, by which I mean that it helps students to engage in social or political actions that can lead to emancipation of the oppressed and the transformation of society.

Postcolonial theory

Postcolonial theory often termed as post-colonialism is a discursive term (Kumar, 2009, p. 82), implying that the meaning of the term can shift depending on positions in relation to “history, agency, representation, identity and discourse.” However, postcolonial theory is said to originate from literature produced by people that were formerly colonized (Mapara, 2009). The theory now focuses largely on ways in which colonialism distorted the experiences and realities of the colonized such as the misconception that African ways of knowing are inferior to those of the European or the West. Thus, postcolonial theory or postcolonial discourse is fundamentally about the colonized or the subaltern using their writing or scholarly work to announce their presence and identity to reclaiming their voice and their past that was lost, marginalized and distorted by dominant narratives of the European colonizers. Postcolonial theory questions the oppositional binaries and representation and power relationships inherent in hegemonic discourses of race, knowledge, language and culture. In other words, postcolonial work aims to decentre Western hegemony over knowledge, requiring that Western epistemic theory and scholarship listen to ‘the other’ and recognize differences to the broader body of knowledge theory (Shaw, Herman and Dobbs, 2006).

Decolonization

In response to the threatening of Indigenous knowledge by ‘colonial infrastructure’ (Simpson, 2004), decolonization requires the dismantling of structures that continue to undermine efforts to strengthen Indigenous knowledge systems. Decolonization also involves the removal of known vestiges of colonial mentality that continue to plague the intellectual emancipation of colonized peoples, as well as engaging in anti-colonial strategies for the protection, recovery and maintenance of Indigenous knowledge. Decolonization, Simpson (2004, p. 381) articulates, involves strategies for the preservation and recovery of Indigenous knowledge and this however calls for the “deconstruction of the colonial thinking and its relationship to IK.” Decolonization, more importantly entails using Indigenous scholarship to confront “colonial power knowledge” (Doxtater, 2004, p. 626). This type of scholarship broadens the understanding of Indigenous perspectives and epistemologies. Decolonization processes involve acts of resistance that provide a platform for self-determination, social justice, and to fight for Indigenous land rights. Decolonization processes also entail critically engaging and encouraging Indigenous ways of life and cultural practices (e.g. - agriculture, medicine, governance, etc).

Place-based education

According to Gruenewald (2003, p. 3), place-based pedagogies are culturally relevant educational practices / experiences that might help citizens “have some direct bearing on the wellbeing of the social and ecological places people actually inhabit.” Place-based education has a broad theoretical frame that is connected to experiential learning,

contextual learning, outdoor education, Indigenous education, environmental and ecological education, bioregional education, community-based education, critical pedagogy and more. Place-based education is argued to have closest affinity with outdoor education. In fact, place-based education is ecologically grounded because it embraces human experience and connection to the other, the rest of nature and the world. Place-based education emphasizes the knowledge of local ecologies, and the responsibilities to preserve the environment for the subsequent generations.

Locatedness

Locatedness in the context of this dissertation implies the place where Igbos are residing. For the sake of this study, the locatedness of Igbos are categorized into three groups: 1) homeland Igbos i.e. - those that live in the natural geographic location of the Igbos in south eastern Nigeria 2) Igbos that live in Nigeria, outside the geographical area of Igbo land, and 3) diasporic Igbos i.e. – those that live outside the country – in the context of this study Igbos living in Toronto, Canada.

Sustainability

Sustainability is a polemic concept and a term that has provoked controversy and disagreement (Landorf, Doscher and Rocco, 2008). Its “fuzziness or ambiguity” has led to multiple, often contradictory interpretations (Stevenson, 2006). These meanings of “sustainability,” will be briefly discussed in this dissertation, but for now, I offer the most widely used definition of sustainable development, given in the Brundtland Commission report, *Our Common Future* (World Commission on Environment and Development,

1987). In this landmark report, sustainable development is defined as “development that meets the need of the present without compromising the ability of the future generation to meet their own needs” (WCED, 1987, p.8, cited in Landorf et al., 2008, p. 223). There is still wide debate about this definition in relation to its scope. In this study, I would like to narrow the broad concept of sustainability to a particular area of interest, which is Indigenous sustainability. Indigenous sustainability is a new movement in the field of sustainability, concerned with addressing the disadvantages experienced by Indigenous people in all aspects of society (Kinnane, 2002). In the context of the Igbos, Indigenous sustainability is the application of measures geared towards the restoration and recovery of Indigenous knowledge, culture and language to promote the ecological, economic and social well-being of the Igbo people. Indigenous sustainability does not, however, relegate or exclude the dominant Western paradigm; the view here is to synergistically integrate Indigenous views and Western views in the discourse of sustainability and knowledge production, for a better overall understanding of our problems and for the ecological, economic, and social well-being of the entire human race. In other words, (Indigenous) sustainability “requires respect for local knowledge and practices, and argues for diversity to be allowed to flourish” (Marinova and Raven, 2006, p. 593).

Epistemology

Cruz (2003, p. 23) defines epistemology as the “philosophical study of what is required in order to have rational beliefs and knowledge.” Different cultural groups have different worldviews – i.e. the ways they perceive their world or unique ways of life or belief systems. Cultural perceptions cannot be adjudged as the truth given that some perceptions

or worldviews of cultural groups are as the result of superstition and poor reasoning. For instance in pre-colonial Igbo, the birth of twins are regarded as abomination. This is one extreme worldview borne out of superstition and poor reasoning. However, typical epistemological questions tries to illuminate the difference between knowledge (what can be regarded as truth) and opinion. For a belief to be knowledge, that belief is required to be true. Though the concept of ‘contextualism’ maintains that truth of knowledge varies from context to context, what is truth in a specific cultural context might not hold in a different context. Thus, reality in Western context might not be reality in the African environment. This calls for caution when imposing Western universal ideas in the African context, and this has serious implications for educational policy and development initiatives. Consequently, it is crucial to make it clear to Indigenous students that Western epistemology represents a particular model, and that every cultural group, society, people and nation can have its own rationale for its epistemological foundation, especially in the context of education provided in schooling (Ogawa, 2007). Furthermore, empirical rationality as in the case of some aspects of Western knowledge should not always be the basis for validity of knowledge given that Indigenous epistemologies value intuitive, non-material spiritual sources of knowledge often discounted as irrational by Western epistemologists.

Problem statement

The Igbo communities of Southeast Nigeria like the rest of Africa and indeed like Indigenous people worldwide, shaped their own changing, local cultures and knowledge forms prior to their encounter and interaction with Europeans. Indeed, novelist and poet

Chinua Achebe's (1958) magnum opus *Things Fall Apart*, which gives a narrative account of the colonial alteration of Igbo cultural traditions, provides great insight into the Igbos' experience with colonialism. Chinua Achebe, an Igbo himself, succinctly captures Southeast Nigeria's colonial experiences and how this new worldview dramatically altered traditional Igbo worldviews. Achebe's (1960) *No Longer at Ease*, the sequel to *Things Fall Apart*, satirically presents an Igbo culture and tradition (and, by extension, broader Nigerian culture) that has been battered, brutalized and altered by the European colonialism which radically shifted worldviews, cultures and epistemic systems.

What Achebe is saying in these two great novels is that the Igbo cultural tradition and ways of life have fallen apart as a result of the forceful encounter with colonialism, which brought an alien worldview. Ever since that forceful encounter, the Igbo culture and tradition are no longer what they used to be; therefore, "things fall apart, the centre cannot hold" (Achebe, 1958). The near annihilation of Indigenous cultures however is not unique to the Igbos as it is the experience of most colonized people around the world. Achebe's narratives in these novels affirm the dislocation of Igbo Indigenous epistemologies as a result of this encounter. I concur with his view that posits colonialism as the origin of the erosion of Igbo Indigenous worldviews and epistemic systems. Before this encounter, the Igbos read, interpreted and made sense of the world through the lenses of their Indigenous worldview, for instance, agriculture, medicine, traditional science, technology, as well as weaving traditional clothes, tapping palm wine, iron work, blacksmithing and a host of other cultural practices that make individuals useful in their

natural environments were based on Indigenous knowledge (Fafunwa, 1974; Omolewa, 2007).

Prior to colonization, communities of Southeast Nigeria practiced sustainable farming by means of shifting cultivation and crop rotation. Communal commons such as forests were harvested sustainably, and members of the community who greedily exploited the resources of the forests unsustainably stood the risk of sanction or outright excommunication from the entire community (Chokor, 2004). For instance, in my own community, individuals are barred from entering the forest on certain market days. This rule is a way of ensuring sustainable practices. A certain man in my village laid claims to the community's forest by alleging that the forest belonged to his forefathers. As a result, the man was ostracized from the community for several years. When he died, his children couldn't bear the pain of social sanction any longer and were forced to reconcile with the community by performing a reconciliatory ritual. This example is testimony that communality relations continue to be well respected in Igbo societies.

The paradigmatic shift in Igbo way of life brought about by colonization produced social, ecological, linguistic, and cultural consequences in the overall cultural milieu of Igbo in South eastern Nigeria. Through a study of the renewal or regeneration of Indigenous knowledge by way of a culturally-informed environmental education, this dissertation addresses the following research questions, which serve as a guide for exploring the decline in Igbo Indigenous knowledge:

1. Why Igbo Indigenous knowledge is declining and do Igbo still value their Indigenous knowledge and language?

2. Does location (that is where Igbo are living) has effect in the decline, preservation as well as the generational transfer of Igbo Indigenous knowledge?
3. Is there any possibility of using a culturally based Indigenous environmental education in Igbo language instruction to revamp Igbo Indigenous knowledge?

Significance of research

The rate at which Indigenous knowledge, Indigenous resources, Indigenous languages, culture and environment are being depleted and degraded in sub-Saharan Africa is frightening and must be addressed immediately. The whole of Southeast Nigeria in particular has been designated an ecological disaster zone by the federal government of Nigeria due to erosion and the resulting gullies (VOA News, November 29, 2008), and the Sahel part of Northern Nigeria has also been declared an ecological disaster area as a result of desert encroachment, or desertification (Ishaya and Abaje, 2008; Grove, 1951; Ijioma and Agbaeze, 2004). The world is aware of the environmental damage in Nigeria's Niger delta, due to an enormous amount of pollution caused by the extractive activities of multinational oil corporations. Although serious environmental problems exist in almost every part of sub-Saharan Africa, my focus here is on Southeast Nigeria.

This research is significant because it tries to create awareness about the loss of Indigenous knowledge in Southeast Nigeria, which I argue has contributed to the grave ecological and social problems in that part of the world. It is wishful thinking to assume that all aspects of Igbo Indigenous knowledge can be recovered to what it used to be in pre-colonial times. Moreover, this study does not seek to oppose development or the conveniences brought by Western development, nor does it encourage Igbo communities

to eschew such conveniences. That would be impossible! In fact, it is not the purpose of this work and I am not interested in having people revert to the old system. No culture or society is static, but what is crucial here is how to renew interest in socio-historically constituted knowledge forms so that they can coexist alongside and inform the dominant Western worldview that people have come to embrace.

For one thing, the recovery of traditional knowledge is most important now because research suggests that significant aspects of these knowledge forms are disappearing at an alarming rate (Msuya, 2007; Ocholla, 2007). For instance, Keane (2008), in conducting research on the role of Indigenous knowledge in the science curriculum for a Zulu community in rural KwaZulu-Natal, South Africa, discovered that the erosion of Indigenous knowledge was clear in young people who seemed to lack knowledge of their natural environment. He lamented that during walks through the village, the young people could not name local trees or what they were used for. Though this observation was made in South Africa, it is even worse in Igbo land. It is my experience that the Igbo have a proclivity to shun local Indigenous knowledge in favour of anything Western. Most young Igbos have lost their mother tongue, and there is a significant relationship between native language and knowledge of local ecologies and resources. Romaine (2007) argues that the maintenance of Indigenous languages is essential to preserving local ecosystems, and can ultimately prevent or reverse the death of cultures and languages. Similarly, Hoppers (2002, p. 7) warns, “the erosion of a people’s knowledge associated with natural resources is under greater threat than the erosion of the natural resources themselves.”

Lastly, this study also contributes to a better understanding of the implications of epistemological dominance, which is when one epistemology overshadows those of marginalized peoples, as exemplified by the Igbo diaspora immersed in Western culture. By studying the Igbo diaspora in Toronto, caught up in linguistic, cultural and epistemic dilemmas, I also consider the results of being removed from one's Indigenous knowledge and immersed in mainstream Western culture. Comparing the homeland and diasporic Igbo communities will help establish the effects of locatedness on cultural transmission from one generation to another and the loss of language and Indigenous knowledge. I am of the view that this research on Indigenous environmental education, focusing on both Nigerian Igbo and diasporic Igbo remains under-researched, innovative and has possibilities of adding much nuance and complexity to the discussion. Furthermore, Indigenous research can only be important when it benefits the community for which it is carried out for. For that reason, this research presents the possibilities for promoting the social, cultural and ecological sustainability in Southeast Nigeria.

Igbo Diaspora in Brief

Since the cultural and social locations of Igbo diaspora in Toronto are considered in this study in relation to the preservation of Igbo Indigenous knowledge, I would like to present a brief historical migratory trajectory of Igbo diaspora. From the 1960s to the 1980s, many Igbo migrated to the Western world, especially the United States, Britain and a few to Canada, in pursuit of a Western education. A good proportion of these international students returned to Nigeria upon the completion of their academic studies, most of whom today hold leadership positions in various sectors of the economy. A

fraction of them remained in the West. The 1990s witnessed another group of Nigerians (especially Igbos) migrating to the West, due to the harsh economic conditions in Nigeria. This group consists largely of economic migrants, primarily interested in improving their economic conditions (Obi, 2010).

These Igbos, in whichever part of the West they are located, constitute the Igbo diaspora in the West. They have raised children in the West. But wherever they are, they continue to have links with the homeland. There is an adage that goes, “no true Igbo forgets his/her birth place, and the head of the dead Igbo cannot remain in a foreign land.” However, the growing concern of these Igbos in the diaspora is that their children have significant linguistic and cultural deficiencies in relation to their Igbo roots (Obi, 2010). Although they try to transmit Igbo identity to their children by giving them cultural and ethnic symbolic names, the question remains, is symbolic Igbo naming sufficient for Igbo identity formation? In his thought-provoking book titled *Readings for Amerigerian Igbo: Culture, history, language, and legacy*, Obi (2010) laments that the diasporic generation is burdened with linguistic and cultural dilemmas, such as not being able to understand the language, customs and traditions of their parents.

As a result of the urgent need to preserve Igbo Indigenous knowledge, I have designed a practical Indigenous environmental education course that comprises vital Igbo Indigenous knowledge and cultural praxis, presented as a practical implication of this study. These include Igbo funeral ceremonies, the mourning of a loved one, traditional marriage ceremonies, child-naming ceremonies, respect for other humans and elders, folklore and plays, the New Yam Festival, the farming, harvesting and planting festival, Igbo market days, circumcision, *Igbu nkwu*, the symbolic harvesting of palm fruits, and

most importantly, innovative ways to renew our depleting local ecological resources. The exploration of all these topics demonstrates how Igbo culture and Indigenous knowledge have evolved over the years, and how they have incorporated aspects of Christianity and Western culture, thereby validating the notion that Indigenous knowledge is always evolving (Shava, 2011; Dei, Hall and Rosenberg, 2000). The culturally-based Indigenous environmental education is intended to benefit both homeland and diaspora Igbos. By designing a curriculum that can help to preserve Igbo culture, I am making a contribution to the revitalization of Igbo Indigenous knowledge in Southeast Nigeria through culturally-based environmental education.

Research Design

This research is an Indigenous environmental education research using Indigenous and decolonization methodology. Indigenous research is an aspect of qualitative research because it is interpretive and concerned with multiple realities (Kovach, 2012). A more detailed discussion of this methodological approach is presented in chapter five. In this Indigenous environmental education research, involving the preservation/protection of Igbo Indigenous knowledge, I am guided by the philosophical worldview that there are multiple ways of interpreting reality, and as a strong advocate of Indigenous sustainability, I believe that Indigenous problems can be better understood by incorporating Indigenous perspectives as well as Western viewpoints. As a result, I argue that by allowing Indigenous knowledge and Western worldview to exist side by side in school curricula, students and communities in Southeast Nigeria will be able to draw from multiple ways of knowing to solve their local problems. The rationale is that

multiple perspectives from diverse worldviews increases creative problem-solving and collaborative work.

Contrary to the notion of plurality, Western positivist researchers shun the idea of plurality arguing that western epistemic tradition presents the only objective way of determining what truth is. However, not all Western researchers subscribe to this notion, as feminist orientations to research are increasingly committed to epistemological plurality by encouraging multiple perspectives (Haraway, 1988; Harding, 1986). Positivists disregard research that encourages multiplicity by arguing that under a pluralist approach anything could be termed as the reality. I do not however, subscribe or uphold the notion of extreme cultural relativism, which pejoratively implies that “what we hold as good and true are merely social or personal constructions, and that every belief about a certain topic is as true and good as every other” (Ohman, 2006, p. 158). In concert with Ohman (2006), I support the idea that a practical understanding of reality should not be based exclusively on a positivist or objectivist way of seeking universal answers about human phenomena, but on a reflection of human experiences from diverse perspectives.

In furthering the argument for epistemological and methodological plurality, Cole (2007, p. 40) argues that “there is an inherent danger in universalizing a version of environmental literacy as a concept that privileges culturally specific knowledge.” Cole (2007) maintains that by failing to recognize and deconstruct the Western values and ideologies that dominate the discourse of environmental education, we are explicitly promoting and reproducing hegemonic systems of knowledge that exclude multiple ways of knowing and living in the world. Indigenous peoples use their knowledge systems or

traditional ecological knowledge (TEK) to live in the world, and as such, their knowledge systems should not be excluded in community development initiatives specific to their local environments. In the same vein, Cajete (1994, p. 21), commenting on the need for Native American Indian education to be fundamentally based on relational reality, argues that:

Traditional Indian education represents an anomaly for the prevailing objectivist theory and methodology of Western education.... This mindset of objectivism, when applied to the field of Indian education, excludes serious consideration of the relational reality of Indian people, the variations in Tribal and social contexts, and the processes of perception and understanding that characterize and form its expression.

The reality in south eastern Nigeria is that the Western-based education curriculum has excluded Igbo Indigenous ways of knowing. As a result, traditional modes of thought are being replaced by a Western mindset, and the consequence is the decline of Indigenous and traditional knowledge of Igbos.

The fieldwork for this research was conducted in Southeast Nigeria and Toronto, Ontario, Canada. Due to the vastness of the region studied, this research did not cover all five states in the Southeast geopolitical zone, namely Abia, Anambra, Ebonyi, Enugu and Imo. A total of nine interviews were conducted in the homeland. Eight participants were interviewed from two main local government areas in Imo State - Owerri North LGA and Owerri West LGA - while one interview was conducted in Uguta areas in Imo state. In Toronto, three interviews were conducted as well as six months of observation carried out in the Igbo language school. A detailed analysis of the interview data is presented in Chapter five.

Dissertation Layout

Having laid the groundwork for this study in this introductory chapter, the remaining sections of this dissertation are arranged as follows. First, the Literature review is divided into three components: Chapter 2, 3 and 4. This arrangement is convenient in view of the fact that two chapters in the review are structured as essays and I cannot put these chapters together given that they explore specific aspects of the issues undergirding this work. I consider this type of structure as expedient in view of the complexity and diverse issues explored in this research and also this arrangement will help me present my views better.

In Chapter 2, I discuss the theoretical framework. I argue that Indigenous education / knowledge intersect and is connected to postcolonial discourse, decolonization and critical pedagogy.

Chapter 3 – *Indigenous sustainability: The firewood of a place cooks the people’s food* begins with an exploration of the metaphor “firewood of a place cooks the people’s food.” This is an Igbo adage, interpreted to imply that all people have special cultural skills that enable them to adapt to their natural environment or local ecologies, with distinct cultural peculiarities. I apply this metaphor to the concept of sustainability by arguing that the notion of sustainability should draw from this adage, taking into consideration the social, cultural, economic and ecological realities of cultural locations. From the standpoint of this Igbo adage, I critique the facile and simplistic one-size-fits-all approach to sustainability for every culture, irrespective of local distinctiveness. The discussion explores the definitions of Indigenous knowledge and Indigenous

sustainability. The effects of colonialism, early missionary education on Igbo Indigenous knowledge are also explored. Also highlighted in this chapter is the relationship between Igbo language and Indigenous sustainability.

Chapter 4 – *Igbo traditional education before colonization* argues for Igbo Indigenous environmental education by critiquing those aspects of Western individualist culture that subvert Igbo Indigenous knowledge and sustainable relations with nature. It also explores Indigenous Igbo environmental education in pre-colonial Igbo society and traditional institutions as agents of socialization/education in traditional Igbo society. I also argue that a culturally-based Indigenous environmental education can nurture human-nature relationships. In order to provide a broader view of environmental education, I briefly examine the historical development of Western environmental education. This is followed by a review of contemporary literature on African environmental education. This discussion leads to local environmental initiatives and the possibilities of conflicts arising due to differences in ideas. Finally, I critique contemporary education and environmental education, and subsequently advocate for a culturally-based approach as a basis for rethinking environmental education.

In Chapter 5, the methodology chapter, I explore Indigenous the methodological approach undergirding this study. The rationale for choosing it is explicated in detail. Interviews and fieldwork both in homeland and Toronto are discussed in depth. A brief description of major participants in the study is also included in this chapter.

In Chapter 6 – *Discussion, Analysis and Findings*, I discuss the themes identified from the data, some of which are: a) Indigenous knowledge in traditional Igbo society; b) the valuation of Indigenous knowledge in contemporary Igbo society; and c) the effects

of Western modernization and the conveniences of development on Igbo Indigenous knowledge. The discussion also reflects on Igbo worldviews, respect for elders and nature, and the implications of the interaction between Igbo Indigenous knowledge and Western knowledge. The analysis discusses the pedagogical implications of relegating Igbo language to inconsequential vernacular and the effects of locatedness in Indigenous knowledge regeneration. The discussion culminates in a comparative analysis of homeland and Igbo diaspora perceptions of one another in relation to Igbo Indigenous knowledge and language preservation. To add more nuance to the discussion of diaspora preservation of culture, I also briefly look at other diaspora (for example, the Indian Punjabi Sikh diaspora in Brampton, Ontario) to examine how their diasporic preservation of cultural heritage compares with the Igbo diaspora.

Finally, Chapter 7 – the concluding chapter reaffirms the thesis statement and the summary of the main thesis and arguments presented in the dissertation. The findings of the study are highlighted around the concept of Igbo Indigenous sustainability. The conclusion presents the theoretical and practical implication of the findings of the research. In addition, policy implications and recommendations and suggestion for future research are highlighted. Finally, I state limitations of the study and a closing statement.

I also include a number of Appendices. Appendix A provides some verbatim statements of participants, so as to acknowledge their perspectives. Appendix B applies the findings of this study to design an Indigenous culturally-based environmental education course/program. This is based on a pragmatic approach to teaching environmental education from a culturally-based perspective. The goal is to renew interest in Igbo Indigenous knowledge, for Igbos in the homeland as well as in the

diaspora. The course design may also have a wider applicability. It relates theory to practice, employing the “stop theorizing, just do it” approach.

Chapter Two

Theoretical Frameworks

Indigenous knowledge perspectives are unjustly represented in dominant mainstream Western knowledge systems (Shava, 2011). It is seen as primitive and low-status knowledge. The rejection, misrepresentation, marginalization, subjugation, and exclusion of Indigenous knowledge (Dei, Hall and Rosenberg, 2002) is as a result of the cognitive hegemony and grand narrative perpetuated primarily by Western knowledge's institutional canon (Dei et al., 2002; Hoppers, 2002; Hountonji, 1997; Masuku van Damme and Neluvhalani, 2004). In view of the long-time marginalization and misrepresentation of Indigenous knowledge, I use postcolonial discourse and decolonization as theoretical frames to interrogate Western narratives representation of African Indigenous knowledge. I employ these frames to argue, in the context of Igbo Indigenous knowledge that the exclusion of Igbo Indigenous knowledge or Igbo traditional education in the school curriculum in Igbo land, south eastern Nigeria has contributed to the decline of Igbo Indigenous knowledge. This has also impacted on Igbo language, bearing in mind that cultural knowledge and language are intricately related (Dada, 2007; Igboanusi, 2006 and 2008). Thus, the Igbo collectivist cultural traditions and worldviews, upon which the Igbo base their existence and make meaning of their lives has suffered considerably. The relegation of Igbo traditional knowledge systems, however, has profound consequences in socio-cultural and ecological wellbeing of the Igbo people and her environment. To this end, I argue that a culturally-based Indigenous environmental education centered in Igbo language instruction will mitigate the further

decline of Igbo Indigenous knowledge, and possibly regenerate this knowledge systems that has been neglected over the years.

I begin this part of the review with a brief discussion on postcolonial theory and decolonization. While engaging with these concepts, I will show how they intersect with Indigenous education and critical pedagogy. Following the exploration of the conceptual framework, I briefly review some Indigenous knowledge research in the African context with a theoretical framing based on postcolonial theory and decolonization. I further discuss critical pedagogy and its rationale in relation to Indigenous social justice. Subsequently, I further explore Indigenous knowledge research in Africa. In view of the fact that most African Indigenous researchers advocate the integration of Indigenous knowledge into the school curriculum, the notion of complementary epistemology basing the discussion on the concept of two-eyed seeing will be explored to examine advantages and challenges that might occur when African Indigenous systems exist simultaneously with dominant Western knowledge. Since this dissertation also examines how locatedness of the Igbos (with regards to Igbo diaspora) affects the inter-generational transfer of Igbo Indigenous knowledge, culture and language, I explore place-based education, arguing in support of a culturally relevant place-based environmental education.

Postcolonial theory and Decolonization

My focus is to use postcolonial theory and decolonization discourse as a counter-hegemonic approach to interrogate ways in which Western viewpoints have marginalized Indigenous ways of knowing. Postcolonial theory and the concept of decolonization, for the most part, have provided African scholars and writers and indeed other colonized

people of the world, all of whom may be categorized as the subalterns, the opportunity to counter colonial misrepresentations of the colonized. I begin this analysis with a discussion on postcoloniality, and then move on to the discourse on decolonization.

Postcolonial theory in academia is traced to literary studies, in relation to the critiques of colonialism, and its focal point is on rethinking cultural and institutional biases and conceptions assumed to be universal, but which have their origin in Western worldviews (Bhabha 1994; Spivak, 1988). It is not easy to define postcolonialism because, according to Kapoor (2008), it is a contested field. Similarly, Hall (1996) points out that unpacking the concept is not easy because the history of the colonized and colonizer are somewhat muddled up. However, Kapoor (2008) notes that postcolonial discourse is fraught with ‘complex connections’ between domination and resistance, rooted in colonialism. Kapoor (2008, p. Xiv) states that “post-colonialism turns the gaze back onto the colonizer to better reveal the tactics and representational practices of the dominant.” Further, he posits that postcolonial discourse provides the opportunity to reinterpret the relationship between the colonized and the colonizer, thus interrogating unequal power relations and the dualism associated with Western/Indigenous knowledge such as superior/inferior, civilized/uncivilized, etc. This duality corresponds with McCarthy and Crichlow’s (1993) assertion that postcolonial discourse encourages us to question long-established binaries and dichotomies such as Indigenous knowledge/Western knowledge. These binaries, McCarthy and Crichlow (1993) argue, privilege the Western knowledge system, consequently postcolonial theory can be articulated as a site of ‘dialogic encounter’ to interrogate the binaries of centre/periphery relations. McCarthy and Crichlow’s argument, however, mirrors Spivak (1988), who

implores postcolonial academics to use their research/work to reassess the imbalance in centre-periphery epistemic power relations, which impacts knowledge production. I argue that such counter narratives open possibilities to retrieve and resurrect silenced voices of the subaltern and the disenfranchised.

Based on my analysis of the work of a selection theorists in the field, I define postcolonial theory as a conceptual frame for probing, interrogating and critiquing Western knowledge production, the grand narratives of history, epistemology, progress, and cultural production, while valorizing alternative or marginalized viewpoints or suppressed narratives now emanating from the subaltern, minorities and the peripheries characterized as the Third World.

Carter (2004) argues that postcolonial theory helps us to move beyond stable and unitary ideas concerning culture, traditions, and identity. In other words, postcoloniality opens possibilities for multiple perspectives on the ways in which the meaning of culture, knowledge and identity are constructed. Carter (2004) states that postcolonial theory offers critical thoughtfulness to question hegemonic ideologies, dispositions, and values embedded in education generally. Applying critical thoughtfulness in matters relating to epistemology is cogent. This need arises from the tendency of some teachers/educators in Indigenous societies to reproduce Western knowledge and ideologies that are frequently incompatible with Indigenous ways of knowing with limited reflection as to the usefulness and practicality of the knowledge in Indigenous societies.

Having provided a brief overview of the meaning of postcolonial theory and the context in which it can be put to use here, I will now present a discussion centering on

engaging postcolonial theory to counter hegemonic discourses. I examine relations of power and knowledge, as well as repositioning Indigenous knowledge and education generally in Africa, using Kayira's (2013) work *(Re) creating spaces for uMunthu: Postcolonial theory and environmental education in South Africa*. Although Kayira's work is with particular reference to Malawi and South Africa, it broadly explores how educational systems in Africa continue to be grounded in Western worldviews, while marginalizing African Indigenous ways of knowing and ways of life. Kayira (2013) argues that Africa's long history of colonization institutionalized a colonial mentality, such as Africans believing that their own ways of knowing and understanding the world were inferior to the colonizers. Kayira (2013, p. 2) argues that in response to this colonial propagation and marginalization of African Indigenous knowledge systems, growing numbers of African Indigenous scholars are "engaging in postcolonial counter-hegemonic approaches to de-centre the dominant discourses, reverse relations of power and knowledge and reposition Indigenous ways of knowing and being as an equal part of education and knowledge." Furthermore, Kayira (2013) notes that the relevancy of postcolonial theory in the African context is that it opens up spaces for environmental education in Africa to be grounded in the African notion of *Ubuntu*. *Ubuntu*, Kayira (2013) explicates, is the concept of African humanism rooted in lived dependencies and traditional values of mutual respect for one's fellow kinsmen, embedded in the worldview of sub-Saharan Africans.

Although Kayira's (2013) argument is based on using postcolonial theory to rethink and reposition African education inherited from colonialism, doing this means including Indigenous knowledge in the curriculum and also aligning it with the African

concept of *Ubuntu*. Kayira (2013, p. 8) points out that the issue of including Indigenous knowledge in the curriculum needs some clarification because in her view not all forms of Indigenous knowledge systems in the community should be included in the curriculum, “but rather those that are relevant and appropriate.” As an African, I understand the point she is trying to make, however, judging Africa’s worldviews as good or bad, relevant or irrelevant, useful or useless, is tantamount to legitimizing Western worldviews that promoted the dualism that favoured Western epistemologies and sees African ways of knowing and being as inferior. In the first place, this is the type of thinking we should repudiate using a postcolonial framework. That we Africans can now see African worldviews as good or bad, assumes that we are now operating in colonial mentality and sensibilities. What we fail to realize, however, is that African Indigenous knowledge, irrespective of how it is perceived represents symbolic cultural knowledge or tradition when examined in the African context. In my view, postcolonial theory becomes relevant in relation to critiquing these views propagated in colonialism rather than affirm them. Therefore, postcolonial theory calls for ‘decolonizing the mind’ (Ngugi wa Thiogo, 1986) with respect to challenging dominant Western perspectives.

Kayira (2013, p. 8) further argues that it is not only the ‘mind’ that needs decolonization, but also related institutional practices that advance these taken for granted views and call subjugated and dominant groups to reject “the dominant languages and practices of power that have divided us into superior and inferior, ruler and ruled, and developed and developing.” While agreeing with this view, I think it is important to put into perspective the extent to which dominant ideologies have pervaded the mindset of people. For instance, a considerable number of Igbos still view and believe that their

Indigenous knowledge is a low status knowledge and that aspects of their cultural practices, as alluded above, such as cultural festivals and Indigenous medicines are superstitious, irrational and inferior. Although territorial colonization formally ended many decades ago in Africa, mental colonialism is very much in place. This is exacerbated by increased cultural flow under globalization. Dismantling dominant ideologies might not be easy, but I think postcolonial work provides the framework and space for colonized people to resist dominant views about their worldview and realize that their knowledge is a viable alternative. Similarly, Battiste (2004, p. 2) opines that postcolonial theory is not only about “criticism and deconstruction of colonization and domination but also about the reconstruction and transformation including liberation from colonial imposition.” In other words, liberation from colonial imposition calls for the need to root African education in Indigenous thoughts, which implies the notion of ‘going back to roots’ while borrowing from positive aspects of Western epistemologies/worldviews.

Furthermore, Kayira (2013) applied postcolonial theory to analyze environmental education studies in Southern Africa, and observed that most studies that seem to employ a postcolonial frame, generally explore Indigenous knowledge systems. In addition to this observation, most of these studies in Indigenous knowledge are also tied or linked with Indigenous environmental education - in the African context the two go hand-in-hand. Kayira (2013) argues that it is not surprising that these studies are grounded in postcolonial theoretical framing considering that Indigenous knowledge systems have been subjugated; for this reason, the use of postcolonial theoretical frames that recognize multiple perspectives seems appropriate.

Kayira (2013) observed that studies with postcolonial framing highlight the marginalization of African Indigenous knowledge and language in the school curriculum, integration of Indigenous knowledge/language in pedagogy, and biodiversity preservation concerns. Using the work of Masuku Van Damme and Neluvhalani (2004) as an example, Kayira (2013) reveals that the work identified marginalization of Indigenous knowledge in education resulting from colonization, which continues in the form of globalization and neo-colonialism, and calls for focus on Indigenous knowledge in response to environmental issues in Africa. The authors equally argues that it is problematic to treat knowledge as objective and universal, rather knowledge ought to be seen as relative, tacit and contextual, noting that “articulating Indigenous ways of knowing as ‘knowledge’ has reified and treated them as a ‘thing or object’” (Masuku Van Damme, 2004, p. 364). Indigenous knowledge is better seen as a culturally situated way of knowing of a particular people, emanating from interaction with a given socio-historical contexts, thus reaffirming (Hoppers, 2002). In addition, these authors argue that the inclusion of Indigenous knowledge in the educational contexts will help in the process of mobilizing and re-appropriation of Indigenous knowledge in South Africa.

Furthermore, other studies that focus on curriculum and pedagogy subscribe to the idea of integrating worldviews and hybridized knowledge (Kayira, 2013). This hybrid space (invoking Bhabha, 1994) concept of ‘third space’ provides spaces where cultural meanings and representations are negotiated. Within this site, education stakeholders such as teachers, students, curriculum developers, elders and community groups can collaborate in the co-construction of new hybrid meanings, more especially in methodological approaches to science education, believed to be aligned with the

Eurocentric perspective of science. Kayira (2013) further highlights that such authors observe that sustainable development practices as highlighted in southern African education curricula and United Nations sustainable development documents reveal that the pedagogy espoused via sustainable development is predominantly Western-based epistemology, and does not include Indigenous knowledge systems and cultural practices. Again, Kayira (2013) highlights that such authors argue that educational reforms that integrates Indigenous knowledge systems and practices while also including approaches such as eco-justice and place-based education, could benefit not only the understanding of environmental education in Africa, but also developed countries, such as the United States..

Other key points that resonate from Kayira's (2013) review of postcolonial theory and environmental education in the *South African Journal of Environmental Education* includes the suppression of Indigenous languages by privileging English as a language of communication and instruction. Placing the English language over the local Indigenous languages is interpreted by many critical scholars as a form of colonial subjugation and domination of the colonized (Adegbija, 1994). Scholars such as (Dei, 2004; wa Thiong'o, 1986 and Willinsky, 1998) have seen this privileging of English language as a colonial way of establishing superiority over local African languages. To stress the implication of repressing Indigenous languages, Kayira (2013) cites Cleote's (2011) argument that the use of English as a dominant mode of instruction suppresses deep natural environmental knowledge, traditional ecological resources and socio-cultural cum historical aspects of Indigenous knowledge, replacing them with Western world-views of environment, culture and nature. Closely related to the suppression of Indigenous languages is the

representation of Indigenous knowledge. On this topic, Shava (2008) argues that the representations and interpretations of Indigenous knowledge are often seen from the perspective of hegemonic Western knowledge propagated by colonialism. To move away from this mindset, Shava (2008, p. 11) recommends centering Indigenous knowledge systems as a “process of knowledge decolonization that gives contextual and epistemological relevance to environmental education and development processes.”

Lastly, biodiversity conservation is another important concern that resonates in Indigenous knowledge and Environmental education research in the contexts of Africa when drawing on a postcolonial framework. Kayira (2013, p. 16) indicates that authors with this concern generally “found that local communities have beliefs and practices about some animals and plant species that help conserve them.” Prominent amongst these authors are Mokuku and Mokuku (2004) who argue that beliefs and cultural practices guide human relationships with other species. This is testament that complex epistemological framework characterize physical and spiritual interconnections.

I conclude this section with an argument that a postcolonial theoretical framing of Indigenous environmental education research, pedagogy, curriculum development and in fact, education generally in Africa, especially in Igbo-land, in south eastern Nigeria, will provide possibilities for interrogating hegemonic Western ideologies that often constrain Africa’s Indigenous epistemologies. It also suggests finding creative ways of integrating Indigenous environmental education into the school curriculum, reverse power relations, and right the misrepresentations of African Indigenous knowledge. Such ways, however, cannot happen if Africans do not decolonize their thinking.

This leads to the exploration of decolonization - the other twin theoretical frame upon which this dissertation is based. Following upon that, I will briefly discuss how the twin frames – postcoloniality and decolonization intersect with Indigenous knowledge and critical pedagogy.

Decolonization

To foreground the discussion on decolonization, I start with the Tuhiwai Smith's (1999, p. 7) statement that highlights the experience of colonized people with colonialism:

Thus the world's indigenous populations belong to a network of people. They share experiences as peoples who have been subjected to the colonization of their lands and cultures, and the denial of their sovereignty, by a colonizing society that has come to dominate and determine the shape and quality of their lives, even after it is formally pulled out.

Indigenous peoples across the world have stories about their cultures and practices, however, the colonizers produce and tell different stories about the historical and cultural context of the Indigenous people they colonized. For this reason, Indigenous people are engaging in counter-narratives that serve as powerful form of resistance. According to Tuhiwai Smith (1999, p. 2), “research is a significant site of struggle between the interests and ways of knowing of the West and the interests and ways of resisting of the other.” I concur with this statement and also believe that the burden is on Indigenous researchers/academics to use their research to resist research and knowledge production entrenched in Western epistemic tradition.

In other words, Indigenous researchers have the alternative to employ decolonization methodology in their approach to research, without conforming to the hubris of Western research approaches. I defer my analysis on decolonization

methodology, until Chapter Five where I fully explore it. Hence, a decolonization research project must find a way to re-articulate Indigenous epistemological framework rather than passively accept Western knowledge traditions via different modes and approaches to knowledge production.

Proceeding with the discussion on decolonization, Kapoor (2008, p. xiv) acknowledges that decolonization “entails reinterpreting the relationship between colonizer and the colonized that is, seeing it differently by questioning its knowledge/power constructions.” So often, the Western colonizers employed deception to interpret and characterize the colonial subjects. For example, subaltern (African) culture is characterized as backward, primitive, underdeveloped, etc., for the sake of maintaining the status quo knowledge/power relations. Decolonization, Kapoor (2008) argues, has the power to disrupt all forms of hegemonic power, and this disruption involves counter-discourses and resistance from the Indigenous, minorities, and the displaced and marginalized. In that case, the concept of decolonization is most useful in challenging fixed and closed colonial representations, which has resulted in institutional barriers for the marginalized groups.

Similarly, Dei (2004, p. 81) argues that decolonization should not “simply deconstruct, interrogate and challenge imperial, colonial and oppressive knowledges but also subvert the hegemonizing of particular culture, symbolic political practices and significations.” I find Dei’s argument very powerful in regards to using critical decolonization education to interrogate structures of power/knowledge relations and to address educational approaches that continue to privilege Western epistemological approaches over African Indigenous knowledge systems. Furthermore, decolonization of

education in the sub-Saharan African context can be used to properly (re)articulate African epistemologies. For example, there is a strong conception that all elements of the universe (including human destiny and fate that shape life on earth) are derived from the spiritual (Dei, 2004; Agyakwa, 1998), whereas Western scientism is dismissive and indifferent of this source of knowledge. Hence, decolonization education must find ways to re-orientate/readjust Indigenous African students to recognize that emotions and intuitions are culturally-effective ways of gaining knowledge. This argument will be fully explored afterward in this section, when I discuss the intersection of Indigenous knowledge with decolonization and critical pedagogy. For now I continue the discussion on decolonization.

Likewise, Graveline (1998) commented that decolonizing requires resistance, cultural renaissance, self-determination, empowerment, healing, survival and reclamation of Indigenous voice. No doubt, decolonization involves all these, however, for most Canadian Indigenous scholars, decolonization transcends beyond these conditions, as it is tied to land. For example, Emily Roots (2010) describes herself as a white Euro-Canadian, but although white, she is affiliated and immersed in Anishnaabe land and culture due to her work as an outdoor environmental educator teaching Aboriginal content in Canadian history courses while working with Aboriginal students. In her research about experiences that facilitate a decolonizing journey, Roots (2010) noted that decolonizing journeys are facilitated mainly via relationships with Aboriginal peoples and exposure to Aboriginal culture, relationships with allied and resistant non-Aboriginal people and time on land. Land education in the context of Indigenous history and cultures is central to decolonization. This is important because Indigenous people want their own

narratives about their land and not the stories emanating from the settler colonizers, which puts claim on Indigenous land and resources. Root's (2010) study largely concerns the decolonizing journey of non-Indigenous participants, which is significant in the sense that it will help reduce the barriers Indigenous peoples face all over the world. However, I believe the focus should be on how to decolonize Indigenous people themselves given that when Indigenous people achieve self-decolonization, then they will be more capable to fight for their rights, reclaim their land and culture as well as their self-determination.

Many Indigenous researchers (Lowan, 2009; Kawagley and Barnhardt, 1998; Hatcher et al, 2009; Swayze, 2009) like Roots (2010), recognize that the process of decolonization involves land (re)education, immersion in Indigenous culture and worldviews, and their overarching argument is that it is the responsibility of teachers, mainly the non-Indigenous teachers to (re)educate themselves (that is to decolonize themselves) so that they can respectfully regard Aboriginal history, politics, and culture while also creating an opportunity for Indigenous students to draw from their own cultural perspectives.

I must point out that *decolonization* serves the same purpose for both Africans and Aboriginal people, in this sense I mean Aboriginal peoples of Canada, United States, Australia and New Zealand. However, the decolonization project for Aboriginal peoples is more tied to the land than it is for the Africans because of different trajectory of colonial experience. Aboriginal peoples of Canada and Australia experienced settler colonialism, while much of Africa experienced exploitation colonialism. Tuck and Yang (2012) differentiate the two types of colonialism. According to Tuck and Yang (2012), settler colonialism is different from other forms of colonization in the sense that settlers

come with the intention of settling permanently on the seized Indigenous territory. They argue that within settler colonialism, the most important concern of the colonizers is “land/water/air/subterranean earth” thus, the totality of the resources in the Indigenous land. For the settler colonialist, the hold on the land is most paramount.

Furthermore, Tuck and Yang (2012) argue that as settler colonizers dispossess Indigenous peoples of their land and make Indigenous land their new home and source of capital, they contribute immensely to the disruption of Indigenous relationships to the land and this represents “a profound epistemic, ontological, cosmological violence”(Tuck and Yang, 2012, p. 5). Whereas, external or exploitation colonization experienced by peoples in parts of sub-Saharan Africa denotes the exploitation of African world, plants/animals resources and human beings. The extracted/exploited resources are transported to the European metropolises to build wealth for the empire. Historically, products such as spices, tea, tobacco, rubber, cotton, groundnut, palm oil, cocoa, etc. are taken to the metropolises for raw materials to grow home industries. As a matter of fact, the exploitation of Africa is now wearing a new face as the industrialized West continues to exploit solid minerals – gold, uranium, tin, iron, diamond, and crude oil and bio/genetic materials. I condemn all forms of colonialism – external/internal or exploitation/settler colonialism, and it is equally important to recognize that the operative modes of colonization, as Tuck and Yank (2012) clearly assert, overlap and are not mutually exclusive. In view of the fact that settler colonialism, which Aboriginal peoples of the world experienced, forcefully took away their land and resources permanently. Indigenous people in Canada and elsewhere where settler colonialism occurred are particularly sentimental and passionate concerning their usurped land. As such,

meaningful decolonization for this people begins with reclaiming their land, re-education as per the cultural historical narrative of their land, whereas, for most of Africans (with the exception of South Africa, Namibia and Zimbabwe that experienced similar type of colonization), land was not necessarily the issue.

Hence, for Africans, the decolonization project is mainly centered on regaining their culture, language and liberation from colonial ideologies. This liberation, however, will be hard to achieve in view of the greed associated with western capitalism.

To continue, I examine the intersection of the theoretical concepts post-colonialism and decolonization with Indigenous knowledge and critical pedagogy.

Indigenous knowledge and critical pedagogy

In their editorial titled “Decolonization+Indigenizing = Moving Environmental Education Towards reconciliation” in the special issue of *the Canadian Journal of Environmental Education*, Korteweg and Russell (2012) observed that decolonization of education and Indigenizing of environmental education “will take a substantial amount of uncomfortable or even painful re-education by non-Indigenous Canadians to learn and respect Indigenous sovereignty and self-determination on their Lands, but environmental education is the best “place” to do this and lead the way towards what is called the “Eighth Fire” of educational reform” (original emphases, p. 7). I recognize the importance of re-education of non-Indigenous people so that they can be more sensitive and respectful of Indigenous cultures and epistemology however, as I argued above, the re-education of Indigenous peoples themselves is far more important because nobody can

fight their fight for them. Against this background, I hold that critical pedagogy offers the skills and critical perspectives that would better equip Indigenous peoples of the world to fight for their rights, indigenize their thinking and question dominant ideologies that devalue their epistemology. Therefore, critical pedagogy offers potential for recognizing, respecting and valuing Indigenous epistemologies and to resist racism and injustice against Indigenous people, especially in the Canadian context. The exposure to critical pedagogy for both Indigenous and non-Indigenous students will help Indigenous people agitate and fight for their rights and also galvanize support Indigenous people. In fighting for Indigenous rights, Indigenous people must build alliances and affiliations to sustain their cause. Critical pedagogy should espouse social justice, promote the ability/skill to critically interrogate social and political issues and must be central in the education of all children, irrespective of background.

I have argued that critical pedagogy provides the possibility for re-education of Indigenous and non-Indigenous students, as well as decolonization and indigenizing of education and particularly environmental education. To further this discussion, I quote Scully (2012, p. 152) so as to lay the foundation for the exploration of this section:

Continued teaching and use of the historically inaccurate stereotypes of Indigenous peoples perpetuate profound and dangerous misunderstanding and social injustices towards Indigenous peoples.

When the theoretical frames of postcolonialism, decolonization, critical pedagogy and Indigenous knowledge are critically examined, it boils down to counteracting historically inaccurate representations of Indigenous peoples that have caused profound social injustice and institutional barriers towards Indigenous peoples. From Kayira's (2013) analysis, postcolonial African scholars on Indigenous knowledge essentially center their

writing on exposing colonial misrepresentation of Indigenous knowledge – as inferior, low-status, primitive and so on. Similarly, I try to utilize counter-narratives from these theories to expose the colonial education that bequeathed a colonial mentality to Igbos. This mentality makes them look down on their cultural heritage while elevating Western ways of life and epistemology.

For this reason, it becomes necessary to use critical pedagogy and critical Indigenous environmental education to de-centre Western epistemic worldviews and practices that marginalize Igbo Indigenous knowledge, culture, social and ecological sustainability. Also arguing in this context, Dei (2004, p. 78) observes that the ‘power and efficacy of teaching’ can be achieved when “teaching relevant knowledge about Africa is anchored in the local people’s aspirations, concerns and needs.” I concur with Dei in the sense that when teaching is removed from the philosophical position from which Africans can culturally relate, it becomes meaningless to the African students. Although a myriad of problems confront African education and schooling, critical teaching (pedagogy) that seeks to provide African Indigenous students with the critical thinking skills that assist them to interrogate the taken-for-granted assumptions about knowledge and society is the bedrock of education for empowerment and social justice (Dei, 2004). Critical pedagogy, in the Igbo context, also seeks to encourage Igbo Indigenous knowledge in schooling and interrogate structures of power fixated in Western ideologies, cultures and histories of production of knowledge. Therefore, critical pedagogy in the Igbo context and for Indigenous Africans in general must recognize the importance of locally produced knowledge derived from cultural histories, social identities, traditions, daily human experiences and social interactions, not just

implementing Western-styled curriculum and pedagogical approaches that lack relevance in Africa.

Interestingly, critical pedagogy opposes the idea of stripping students of all forms of knowledge they bring from their culture and home to the classroom; this is where critical pedagogy profoundly intersects with Indigenous knowledge. It is consistent with most Indigenous scholars arguing that Indigenous knowledge should be integrated into the school curriculum, and that schooling should find a way of making the Indigenous knowledge that students bring to school relevant (Shava, 2011; Le Grange, 2007; Van Damme and Neluvhalani, 2004; Odora Hoppers, 2001). In this context, Indigenous students should be given opportunity to research their own culture and epistemology, whereby they gather data from their communities through their elders and close observation and relationships with their own environment (see Keane, 2008). These kinds of experience will help Indigenous students produce knowledge from their culture while critically comparing their knowledge forms with the dominant Western knowledge promoted in their school curriculum.

Critical pedagogy must not allow the dominant cultures to subvert the interest of marginalized cultures, as the exclusion of the social, cultural, economic and ecological ways of life and knowing of Indigenous students undermines their critical perspectives on knowledge and society and as well as the development of Indigenous epistemologies. In other words, critical pedagogy must seek to advocate for the inclusion of the culture, language, history, local environment and social values of Indigenous students in the educational curriculum.

It is crucial that critical educators teach African cultural values such as communalism and mutuality as expressed in the concept of *Ubuntu*. It is equally important that critical pedagogy integrate students' national history. For instance, in the Igbo context, students have the right to know their historical background, such as the Nigerian/Biafra war that shape Igbo history, identity and politics. As lack of knowledge of important past histories may affect how present and future social justice and equity issues are understood.

Similarly, arguing in the Canadian Indigenous context, Simpson (2011, p. 22) asserts that "Canada must engage in a decolonization project and re-education project that would enable its government and its citizens to engage with Indigenous peoples in a just and honourable way in the future." I interpret 'decolonization project and re-education project' as simply using critical pedagogy to reveal colonial representations of Indigenous peoples of Canada and address social injustice and equity issues that continue to rear its ugly head in the government of Canada's dealings with the Indigenous peoples. There is no better place to address these hard issues than the classroom where critical pedagogy is practiced. Some of the injustices against Indigenous peoples of Canada that need to be addressed by the government are in the areas of resource control and self-determination of Indigenous peoples of Canada. Also stressing this point further, Scully (2012) argues that decolonization in the Canadian context can only occur on the possibility that Aboriginal peoples and dominant mainstream Canadians engage critically with their history and realize that their present and future are intrinsically tied together (Donald, 2009). These social justice issues, in my own opinion, can only be addressed through an

educational system and schooling that is deeply embedded in critical pedagogy via which young Canadians maybe equipped with a sense of social justice and equity.

In the preceding part of this section, I made the link between decolonization, critical pedagogy and Indigenous knowledge; I now concentrate on unpacking the concept of critical pedagogy.

Rational for Critical Pedagogy

Critical theory incorporates foundational work developed by a group of scholars and intellectuals known as the ‘the Frankfurt School’ (Giroux, 2003, p. 27). According to Giroux, the concept of critical theory refers to the “nature of SELF-CONCIOUS CRITIQUE and to the need to develop a discourse of social transformation and emancipation that does not cling dogmatically to its own doctrinal assumptions.” In other words, critical theory can be seen as a way of thought and the process of critiquing ideas, assumptions and ideologies. Giroux (2003), however, argues that critical theory provided the foundational insights that guided the development of critical pedagogical theory. The Frankfurt School, Giroux (2003) opines, emphasized the importance of critical thinking, which they argue constitutes an important element that leads to self-emancipation and social change. Giroux (2003, p. 50) also argued that critical theory challenges educational theories tied to and “based on assumptions drawn from positivist rationality.” Thus, critical theory is opposed to knowledge shielded from critical possibilities.

Therefore, from this critical standpoint, critical educators agree that the curriculum that we find in most school knowledge is drawn principally from the dominant culture (Apple, 1999), while excluding Indigenous cultural practices and

epistemologies. A typical example is the Igbo case, where important aspects of Igbo epistemology in Igbo language instruction are conspicuously lacking or inadequate in the curriculum/learning experiences of young Igbo students. As a result, some Indigenous teachers (because not all of them care) and even some mainstream teachers who have bothered to critically reflect on the curricular learning experiences presented to students understand the reality of the “complex decisions concerning justice, democracy, and competing ethical claim” (Kincheloe, 2008, p. 1) they are grappling with.

In view of this, Kincheloe (2008, p. 2) argues that:

A central tenet of pedagogy maintains that the classroom, curricular, and school structures teachers enter are not neutral sites waiting to be shaped by educational professionals. Although such professionals do possess **agency**, this prerogative is not completely free and independent of decisions made previously by people operating with different values and shaped by the **ideologies** and cultural assumptions of their historical contexts (original emphases).

In reality, how many educators, more importantly, Indigenous teachers ‘possess agency’? In this case agency is the ability to act in ways to resist and free one’s self from the oppression of power and dominant ideologies that define most school knowledge. Thus, the ability to take action for resistance is the most crucial component of critical pedagogy, given that every dimension of schooling and all structures of educational practice are politically-charged terrain (Kincheloe, 2008). That said, understanding that educational practices are politically contested spaces is imperative for teachers of Indigenous students. Although some maintain the ideology that education is neutral and apolitical, this is inaccurate. Indigenous teachers, as well as students, should realize that an uncritical approach is misleading and those who hold it are mainly people that operate from the dominant paradigm.

Furthermore, Kincheloe (2008, p. 2) argues that the recognition that schooling is inherently complicated political site is a central reason why critical educators should develop “a social activist persona.” I cannot agree more with this statement because as teachers, the insight we gain about our pedagogical practice is influenced by how we understand our culture, race, gender and other identities and ideologies/philosophies that shape them. Hence, for Indigenous teachers to counter dominant narratives and power relations they have to develop a ‘social activist persona’ in order to propagate their own cultural ideologies and epistemology - being passive will not help them resist and confront dominant ideologies, which further promotes the dominant power.

Not only should critical teachers be involved in social activism, they also have to possess the ability to challenge students to see and imagine realities different from the status quo; thus critical students will have to use their critical thinking consciousness to question modes of meaning that normalize indoctrination and social regulation. For instance, in the context of Igbo traditional medicine, many people are educated to believe that Igbo traditional medicine is quack and it is often discounted as inferior to the Western medicine, accordingly people become indifferent or reject it. I understand that Igbo traditional medicine is inflicted with myriads of problems, such as regulation, malpractice, greed and lack of transparency in the system, however, that does not mean that it is all negative as there are many people who still believe in it and that it can be improved (Iwu, 1994; Ghasi, Egwuibe, Achukwu, Onyeanusi, 2011; Okafor, 1999). Critical Indigenous educators must find ways to help Indigenous students question this kind of dominant assumption. Another example that comes to mind is that of the Igbo home land where some parents prohibit their children from speaking Igbo language, on

the misconception that Igbo language interferes with their learning of English/spoken English. Yet research has proven the contrary, knowledge of the Indigenous mother tongue does not inhibit the acquisition of English language in children (Igboanusi, 2008; Dada, 2007; Nwakah, 1984). Critical teachers must use their pedagogy to counter this representation of Indigenous knowledge.

Equally important is that critical Indigenous teachers and students operating in the dominant mainstream curriculum be given the opportunity to explore alternate sources and evaluate different historical interpretations when doing their own research and producing knowledge; not necessarily conforming to the established interpretations (Kincheloe, 2008). Diverse interpretations produce more nuanced insights; however, dominant powers that support these prevailing interpretations and methodologies constrain alternate views. It is disappointing that many Indigenous academics, although critical in their perspectives, conduct their research in conformity with Western traditional standards.

Consistent with the above is that advocates of critical pedagogy are obligated to ensure that democratic notions of education prevail. This means that students learn to make their own choices or form beliefs based on multiple perspectives they deal with in school and their community. Critical teachers do not have to conform to the curriculum (which may include some hidden agenda), likewise teachers should make their position on any issue known to their students; they do not, however, “*have the right to impose these positions on their students*.” This is the central tenet of critical pedagogy,” (original emphases, Kincheloe, 2008, p. 11).

According to Kincheloe (2008), another key point critical pedagogy focuses on is the critique of positivism. Positivist epistemological orientation, for the most part, has influenced the way people in modern society live and shaped education of our time. Positivism has its roots from Western modernism. Thus, for the positivist, curricular contents, methodology, and pedagogical approaches would have to conform to the universal statements, to which students and teachers should strictly adhere. These ‘universal statements’ exclude different perspectives from Indigenous and non-Western cultures, perceived as inferior, low status, unsophisticated, backward, and unscientific (Dei, 2004; Shava, 2011). In view of this, critical teachers must not fail to discern universalizing and normalizing statements and interpretations, no matter the subtleness, its disguise or how hidden it may appear. Indeed, a key element of critical pedagogy is to promote multiple perspectives from Indigenous cultures and non-Western cultures to enrich the viewpoints of students. Before I conclude this section, I must emphasize that critical pedagogy intersects with social justice in relation to Indigenous issues in that it holds potential to perhaps equip or rather inculcate students with skills, sensibilities, passion, and sensitivity that will help them to refuse and reject forces and ideologies that produce human suffering, and all forms of exploitation (such as exploitation of Indigenous people and their resources). This, however, entails taking positions on hard issues (for example, speaking up against racism, oppression, and injustice), and resist and oppose agenda and powers that perpetuate it.

I return to further exploration of African Indigenous knowledge research.

Indigenous knowledge research in African context

As previously discussed, most African scholars who research on African Indigenous knowledge situate their work in post-colonial and decolonization theory (See Kayira, 2013). Some purposefully draw from these theoretical frames while others, without knowing it or stating it, explicitly also draw from these theoretical frames. As marginalized groups, whose voices have been silenced, postcolonial and decolonization theories have opened the window for critical deconstruction of Western colonial narratives and representations of Africa's people, culture and knowledge systems. Below I provide an overview of further research carried out by some African Indigenous environmental education scholars that demonstrates that these scholars draw explicitly or implicitly from the theoretical frames above.

Shava et al. (2009) through research titled "Traditional food crops as a source of community resilience in Zimbabwe" observes that traditional food crops have been the fundamental source of food and nutrition for Indigenous communities in Zimbabwe ever since the people began to live and sustain themselves in their natural environment. Shava et al. (2009, p. 32) argue that these traditional food crops provided the local people with food security, however, with the introduction of modern mono cropping/modern cash crops, traditional crops and traditional farming practices that sustain these cropping systems have to a large extent been crippled, and "marginalized and excluded by modern conventional agricultural practices." I presume that this observation is likely informed by the authors' exposure to postcolonial/decolonization theoretical sensibilities, although that was not explicitly stated in their work.

Shava et al. (2009) refer to their research work as a qualitative ethnographic case study including interviews with six local community farmers around Sebakwe Black Rhino Conservancy in Zimbabwe, focusing on the types of crops grown by local farmers. One of the important themes identified in their research is the role of traditional food crops in providing food security in their vulnerable environment. Their ethnographic study sheds some light on the predicament of the farmers in relation to food security and what is happening to their traditional farming systems, nevertheless, it does not present the local farmers' own detailed narratives as one would expect in an ethnographic study.

Their findings suggest that growing different crops through Indigenous knowledge systems (Nyong et al., 2007) enable the provision of variety of balanced nutrients, such as carbohydrates from local cereals, vitamins and minerals from Indigenous leafy vegetables, and proteins from local legumes. The elderly farmers involved in the research also stated that their traditional diet/food made "them stronger, healthier and gave greater longevity, compared to modern diets" (Shava et al. 2009, p. 36). Indigenous cropping systems ensure diversity in traditional food crops as opposed to modern cash crop or mono-cropping. Apart from growing a variety of Indigenous crops for their sustenance, evidence shows that Indigenous people also use variety of wild food plants to supplement cultivated staples, especially during periods of food scarcity (see Harris and Muhammed's (2003) research on livelihood sustenance strategy for rural communities in Northern Nigeria).

Shava et al. (2009) conclude that due to the reliance on commercialized seeds (from agro commercial companies), Indigenous crops and farming practices and

processing systems that ensure varieties of local staple foods and their preservation for future use have been threatened, thus, the consequence is food insecurity and the inability of the communities to sustain themselves. Shava et al. (2009) further argue that changes in the communities' agricultural practices, which resulted in decreased use of Indigenous crop varieties and the effects of modernization, have impacted negatively on traditional trans-generational knowledge transfer. For one thing, African Indigenous knowledge is embedded in farming practices, and these farming practices sustain Indigenous knowledge. Since modernization hampers the use of Indigenous Knowledge (in this case farming practices) and living off the land, it will most likely affect inter/trans-generational transfer of Indigenous knowledge, and sooner or later, farmers that have such knowledge will not be able to transfer them to the next generation. We have seen how Shava et al. (2009) utilized postcolonial and decolonization theoretical concepts to deconstruct how modernization has negatively impacted on Indigenous/traditional agrobiodiversity and disrupted cultural practices. Through critical analysis, I infer that Shava et al. (2009) were influenced by these approaches.

Similarly, Njoki-Wane and Chandler (2002) researching African women's cultural and environmental knowledge in the Kenyan context argue that rural Kenyan women have a vast knowledge of the environment because of their connectedness to the land, yet their enormous knowledge is not incorporated in the teaching of environmental education. Njoki-Wane and Chandler (2002) insist that the incorporation of these rural women's environmental knowledge will contribute to a better understanding of environmental education. In addition, they argue that the *Embu* rural women African cosmology or belief system bears on how they understand ecosystems, environmental

change, and conservation. Ultimately, Njoki-Wane and Chandler (2002) conclude that the belief systems of ancient African people has significance for how Africans understand their environment and conservation, as well as how they transmit this knowledge to the subsequent generation through stories, riddles, proverbs, and folklore (Fafunwa, 1971). One might attempt to ask why the vast ecological knowledge of these Indigenous women has been left out of the environmental education curriculum even though they are to some extent perceived as the custodians of the land? The Western positivist knowledge, upon which most African education is anchored, perceives these Indigenous women's knowledge as inferior, uneducated, and unsophisticated. Although Njoki-Wane and Chandler's (2002) work is situated within an eco-feminist theoretical framework, a critical analysis of their work, reveal that they also incorporate postcolonial and decolonization approaches to critically deconstruct ways in which Western colonial knowledge has relegated and subjugated African Indigenous knowledge. Since the environmental knowledge to be incorporated resides with rural women further discount the knowledge and speak volumes on how women are ignored in not only environmental education but also the affairs of the world, particularly in Africa.

Mokuku (2012) explores Lesotho's concept of 'the world as our home' to expand conceptions of environment and sustainability. Mokuku (2012) argues that this concept will help us appreciate the nature of Indigenous knowledge in Lesotho, and its holistic conceptualization of environment. Mokuku (2012, p. 163), however, includes another dimension to the notion of African – centred sustainability by stating that *dream* or *pono* (in Sesotho language) is "a vision or an insight that conveys viable knowledge; it is revealed knowledge that illuminates a particular situation." These visions are often

expressed knowledge revealed by ancestors. Ancestral veneration is also an important aspect of Igbo cosmology, belief system and spirituality (see Afigbo, 1981; Ubah, 1988). Indeed Mokuku (2012) notes that a spiritual imbalance can be communicated symbolically when one sees an ancestor standing in a freezing cold and needing help.

Mokuku (2012) further argues that in context of Eurocentric thought, where rationalism and objectification are valued epistemological elements, dreams (*pono*) considered as revelation in African epistemology might be disregarded. Yet *pono* demonstrates that African thought systems are rooted in spirituality while Eurocentric epistemology in contrast is materially conceptualized. Therefore, Mokuku's (2012) work can be thought of as aligned with postcolonial and decolonization theoretical frameworks in the sense that it gives African Indigenous knowledge a voice by moving away from dominant discourses that discount Indigenous knowledge (specifically dreams and spirituality). Thus, the work privileges the discourse of spirituality as an integral component of Indigenous knowledge that has contributed to ecological harmony and sustainability in traditional African society.

Also in the realm of African Indigenous knowledge, Maila and Loubser (2003) argue that Indigenous knowledge often fails to contribute to the improvement of human quality of life because authoritative Eurocentric knowledge systems have accorded a lower status to Indigenous knowledge. Maila and Loubser (2003) argue that the low status attributed to Indigenous knowledge arises because it belongs to particular racial or ethnic groups, often assumed as culturally backward. Regardless of the negative perception of Indigenous knowledge they assert that there is increasing awareness that Indigenous knowledge can contribute to humanity's wellbeing. In order for Indigenous

knowledge to make this meaningful contribution, it has to be incorporated into the school curriculum; hence environmental education provides a means for Indigenous knowledge to be incorporated into the school curriculum (also see O'Donoghue, 1999). Although not categorically defined in their work, Maila and Loubser (2003) apply an approach akin to postcolonial and decolonization frameworks to question hegemonic Western forms of education in Africa which continues to be accorded high status in the school curriculum while devaluing Indigenous knowledge.

Maila and Loubser (2003) also highlights how Western views of Indigenous knowledge, such as lack of universality, stagnancy are based on the 'absolutization' of Indigenous knowledge systems of African people and the arrogance of the West. The assumption that Indigenous knowledge processes should be carried out in the same vein as Western knowledge is a misplaced one. When we make this comparison we situate Indigenous knowledge out of its context. After all, it has been argued that knowledge (whether Indigenous or Western) is a product of a particular culture and society based on power relations and class (Gergen, 2001). Rather they argue that if Indigenous knowledge is incorporated into the school curriculum alongside Western approaches, both knowledge systems would be in a better position to address environmental issues and challenges the world is facing today.

Similarly, Owuor (2008) arguing in the context of integrating African Indigenous knowledge in Kenya's formal education system posits that a culturally centered African Indigenous education, that takes into consideration African environment and needs (especially in respect to Kenya) will most likely support sustainable development. Owuor (2008) further holds that a key challenge facing African Indigenous education is that

African policy makers and education curriculum planners often do not realize that Western development models do not fit African subsistence livelihoods. Unless educational approaches genuinely reflect commitment to incorporate Indigenous knowledge by encouraging local community inputs, incorporating cultural heritage and values, and most importantly grounding education on Indigenous knowledge/language, education, for the most part will be irrelevant to Kenyan students (Owuor, 2008) advocates for multiple perspectives, however, cautions against knowledge standardization and overarching Western epistemological perspectives.

Owuor (2008) concludes that Indigenous knowledge holds the potential to contribute meaningfully to Africa's sustainable development and poverty alleviation, by way of utilizing cultural knowledge to harness local resources. These knowledge systems are threatened by the dominant 'commercialization and commodification' that exploit Indigenous peoples, as opposed to relying on their knowledge to improve their lives. In the light of the preceding views, Owuor (2008) has drawn from the critical deconstruction approach offered in postcolonial and decolonization theories. In fact, she unequivocally states that school knowledge in Africa requires a real 'decolonization.' Through this process, African people can confront the claims outsiders make about their knowledge and ways of life. Thus, critical educators conversant with postcolonial and decolonization deconstructive views must problematize these accepted Western 'universal' knowledge that standardize development while ignoring and excluding pluralistic approaches that respect Indigenous perspectives.

Likewise, Ocholla (2007) argues that the marginalization and exclusion of Indigenous knowledge has occurred over the years, thus, making the development and

integration of Indigenous knowledge problematic. In addition, the reason why Indigenous knowledge is neglected stems from the basis that the knowledge is not codified or systematically recorded, therefore, posing challenges to transfer and sharing of the knowledge. Since Indigenous knowledge is oral and mostly resides in the memory of the rural poor, coupled with its rootedness in the culture, language and spirituality of a particular community, it is therefore understood as ‘not universal,’ which contributes to its marginalization (Ocholla, 2007). Ocholla (2007, p. 3) makes a compelling argument by stating that what has reinforced these views about Indigenous knowledge is arguably an “intellectually colonized mindset” that has produced a generation of Africans that mostly does not recognize, understand and value Indigenous knowledge.

To remedy this problem, Ocholla (2007) articulates some steps through which Indigenous knowledge can be developed so that its integration with other forms knowledge may occur. Such steps include validation of Indigenous knowledge by identifying its relevance, reliability, functionality, effectiveness and transferability as well as codification and documentation/recording of Indigenous knowledge. Ocholla (2007) recognizes the inherent problems and contestation with regards to recording Indigenous knowledge, e.g., the argument that when Indigenous knowledge is recorded, the rightful owners easily lose the ‘moral and material’ ownership of their knowledge and intellectual property. However, what is often missed in suggestion such as Ocholla’s is that they fail to recognize that Indigenous knowledge cannot be conceptualized from Western epistemic lenses.

In spite of recognizing the shortcomings of Indigenous knowledge and highlighting the fundamental ways to improve it, Ocholla (2007) argues for the

integration of Indigenous knowledge into other knowledge forms. He asserts that African Indigenous knowledge has produced tremendous achievements in the field of traditional medicine and health practices, agriculture, biodiversity, education, natural resource management, energy generation and preservation in the communities that hold them. Unfortunately, when Indigenous scholars make these suggestions, they inadvertently make undue comparison of Indigenous and Western epistemic systems, which are situated in different contexts.

Despite my critique of the parallels Ocholla (2007) draws, it is clear that his exploration of Indigenous knowledge falls within the deconstructive lenses of postcolonial and decolonization theories. Indeed he draws from the African novelist Ngugi wa Thongo's (1986) essay "Decolonizing the Mind" to make his case for decolonization of African education and mindset.

Within the same area of scholarship, Msuya (2007) writing about the challenges and opportunities in the protection and preservation of Indigenous knowledge in Africa, with particular reference to traditional communities in north eastern Tanzania, argues that Indigenous knowledge is facing a threat of extinction due to lack of recording and problems associated with preservation and protection of the knowledge from outsiders that copy it illegally. Msuya (2007) argues for returning the benefits of Indigenous knowledge to the rightful owners, and development of Indigenous knowledge through their direct involvement with research. This is in consonance with Ochollas's argument mentioned above. I quite agree that for Indigenous knowledge to be beneficial to the rightful Indigenous communities, as well as develop Indigenous knowledge, some sort of documentation and codification of the knowledge is needed, however, it is important to

recognize that Indigenous knowledge presents challenges that are not found in Western scientific knowledge. For example, in Indigenous societies, knowledge resides with communities and not with individuals. That said, it becomes an ethical issue for one individual in the community to appropriate a community's knowledge by recording it. This would require a consensus agreed upon by all members of the community, however, such general consensus is difficult to achieve.

Instead of focusing on developing database and initiatives that use information technology and internet to enhance the storing and sharing of Indigenous knowledge, as Msuya (2007) argues, I would rather advocate for appropriate Indigenous knowledge policies and practices be put in place, such as training and alternative means of protecting Indigenous knowledge so that the rights of use remains with the people. This may be a more realistic and pragmatic way to safeguard Indigenous knowledge which squares with the finding of research conducted in remote African villages wherein information provided by the rural villagers, is not communicated back to the Indigenous people (Marinova and Raven, 2006). This problem could be deepened when the benefits of their knowledge are put in the public domain in the form of a codified data base that they would not be able to access.

Msuya (2007) also problematizes schooling as responsible for the decline of Indigenous knowledge. For instance the traditional medicine that resides amongst the north eastern communities in Tanzanian, whom he researched, used to be transmitted among family members, from one generation to another. Typically, in these communities, fathers pass their traditional medicine knowledge to the eldest son, while mothers pass theirs to the oldest daughter. However, he argues that as 'potential successors' go to

formal education, they are faced with the dilemma of the choice between abandoning western education and being a traditional medicine man or woman or getting a career from the modern school system. There is no doubt that Indigenous students besieged with this dilemma will go for Western education especially with the material benefits associated with it. In view of this, a complementary epistemology – where both knowledge systems are integrated - will mitigate this dilemma as students are encouraged to learn both systems for a better understanding of their environment and challenges facing them. It is important that Indigenous students and teachers apply the critical perspectives embedded in postcolonial and decolonization theories to interrogate these epistemological systems with the goal of making sure that Indigenous students retain their local knowledge and creatively combine them with Western knowledge acquired in formal education. This leads to the next section, where this whole idea of integration and complementary epistemology is explored using the concept of two-eye-seeing.

However, before proceeding to the details of complementary epistemology, I take a brief moment to distinguish Indigenous knowledge from Western knowledge. Knowing these differences will afford teachers and Indigenous students creative ways of navigating the possibilities and challenges inherent in this type of epistemological marriage. Agrawal (1995) identifies three major differences in the knowledge systems as substantive, methodological/epistemological and contextual differences.

Substantive differences: – arise from history and distinctive characteristics. For instance, some characteristics of Indigenous knowledge include its embeddedness in a particular community, contextually bound, collective values as opposed to individualist values, it is holistic, and it is culturally specific and local contexts type of knowledge, as

opposed to Western knowledge that claims universalism (Van Eijck and Roth, 2007). Nevertheless some hold that these elements that separate the knowledge systems are an artificial divide, as both systems share substantial similarities (Agrawal, 1995).

Methodological and epistemological differences: – Western Knowledge theorists claim that Western knowledge, especially the Western scientific knowledge is open, systematic, objective and analytical. On the other hand, Indigenous knowledge is characterized as closed, non-systematic and non-analytical. I recognize that the dualism between Indigenous knowledge and Western knowledge blurs the actual benefits of complementary epistemology, however, methodological and epistemological differences do exist in the knowledge systems. In Igbo context, methodological approaches to determine reality include close observation of nature and intimate interaction with local ecologies through agricultural practices and experiences gained from sustainable use/exploitation of plants and animals in tropical rainforest biodiversity. Nonetheless, symbolic cultural/Indigenous protocols and traditional ceremonies (some of which are highlighted in appendix B), stories and narratives of elders, cultural institutions and other socializing agents such as masquerades and age grades and spiritual means such as dreams, divination, and revelations are important ways through which Igbo understand their world and determine reality. Conversely, much of Western knowledge, in particular Western science emphasizes empiricism or over-reliance on empirical evidence, thus not recognizing a holistic interconnection of creation (humans, living and non-living entities of nature and the spiritual (Barnhardt and Kawagley, 2005; Lowan-Trudeau, 2012). Interestingly, feminist scientists and much of qualitative research has departed from positivist science orientation (Berry, 2006). Other differences are predicated on the idea

that an Indigenous epistemological framework values multiple perspectives while absolute epistemological truth is acknowledged in Western epistemological perspective (Van Eijck and Roth, 2007).

Contextual difference: – Indigenous knowledge is often conceptualized to exist in a local context, in a particular setting or community. Western knowledge is, however, seen as a coherent knowledge system that is valid regardless of culturally specific, local contexts. This school of thought is commonly referred to as universalism (Van Eijck and Roth, 2007). Cultural relativists counter the notion of universalism by arguing that all knowledge is context oriented. This is not a place to explore the details of this debate but I draw on Van Eijck and Roth (2007) concept of ‘cultural reality and usefulness of knowledge’ to argue that the validity and importance of any knowledge depends on the usefulness of that knowledge in relation to the cultural reality of the people. Part of the reason why Indigenous knowledge is seen as inferior to Western knowledge is that it is conceptualized from the epistemic lens of the privileged dominant knowledge which frequently disregards that Indigenous knowledge has sustained the lives of its bearers long before contact with Western knowledge. However, I recognize the usefulness of Western scientific knowledge in the area of research and technological development, which has resulted in the conveniences of development. Others have equally argued that Indigenous knowledge has contributed to human development and perhaps could have contributed more to human advancement had its natural course of development not been undermined by the encounter with the West and her knowledge. In this work my purpose is to rekindle the hope for Indigenous knowledge rather than adulate the usefulness and importance of Western knowledge.

With this in mind, it is important to consider the educational implications of these methodological and epistemological differences for environmental education. Rather than privilege Western environmental education approaches, students should be presented with opportunities to learn Indigenous environmental education approaches given that complementary epistemological approach provides broader perspectives to solving real human problems in life. Recognizing differences also entail valuing and respecting our diversity and “acknowledging our commonalities and interconnectedness with other people and the Earth’s ecosystems” (Mueller and Tippins, 2009, p. 999). This has significant ramifications for complementary epistemology which I explore next.

Complementary Epistemology: Two-Eye-Seeing

At the outset of this dissertation I advocated strongly for an integration of Igbo Indigenous knowledge and Western knowledge – (i.e., the curriculum that students are exposed to in their everyday schooling), as the most viable way through which Igbo Indigenous knowledge can be preserved. This is premised on the reality that Indigenous knowledge is oral, and that most of the custodians or holders of these knowledge systems who transmit it to the next generation are elderly. There is a saying that they die with their knowledge. Therefore, it is reasonable to bequeath formal education the responsibility to transmit Indigenous knowledge to the next generation. Hence, formal education must serve as the cultural vehicle through which Igbo Indigenous knowledge can be preserved. Also, when Indigenous students learn from both epistemological approaches, they can fashion out creative ways of solving myriad problems facing them in the world today (Aikenhead, 2011; Le Grange, 2007; Dei, 2004; Shava, 2011).

The concept of epistemological integration, what is also referred to as complementary epistemology has been theorized by North American Indigenous scholars and their non-Indigenous allies through the concept of Two-Eyed Seeing. Before going into the details of this concept, I first of all lay out the philosophy behind it and why it has been embraced by Indigenous scholars and native communities. Indigenous scholars have argued that Western educational processes have frequently conflicted with Indigenous knowledge practices and beliefs, and that Western scientific knowledge and formalized schooling do not respect and recognize the philosophical and pedagogical foundations of Indigenous knowledge such as stories and Indigenous protocols (Kawagley and Barnhardt, 1998; Tafoya, 1995). For this reason, many Indigenous students have been disenchanted with formalized schooling that extols Western Knowledge.

Reasoning along this line, Kawagley and Barnhardt (1998) observe that it is unfortunate that the focus of Western education approaches is on how to get Indigenous people to understand the Western/scientific view of the world, with little concern among Western scientists and educators to understand Indigenous worldviews. They call for a ‘two-way street’ kind of relationship or approach – where formal educational systems provide a platform that respect the philosophical and pedagogical foundation in both epistemic systems, such that Indigenous people “may need to understand Western knowledge approaches, but not at the expense of what they already know” (Kawagley and Barnhardt, 1998, p. 8). This ‘two-way street’ approach to education, Kawagley and Barnhardt (1998) argue, must be grounded in Indigenous philosophy and values of respect, reciprocity, survival and harmony, honouring the integrity of the universe

expressed in the tenet of inter-connected system, and most importantly, the belief that nonhuman other or the physical world such as plants winds, mountains, rivers, lakes and creatures of the earth possess spirits, and for that matter have consciousness and are worthy of life. Thus, education intended for the Indigenous students must connect to the land, and this has pedagogical implications.

Based on the philosophy guiding Indigenous education and recognizing that Indigenous students were alienated and disenchanted from formal Western education, Indigenous scholars, such as Bartlett, Marshall and Marshall (2013) adopted “Two-Eyed Seeing” a concept similar to Kawagley and Barnhardt’s (1998) ‘two-way street’ presented earlier. Bartlett, Marshall and Marshall’s (2012, p. 3) ‘Two-Eyed seeing’ supports and encourages efforts “to weave Indigenous ways of knowing into today’s post-secondary educational curricula for environmental education and sustainability studies.” According to Bartlett, Marshall and Marshall (2012), curricular weaving involves the process of drawing Indigenous participants, i.e., recognized Elders who hold Indigenous knowledge, as well as educators trained in the mainstream knowledge. Bartlett, Marshall and Marshall’s (2012, p. 4) insight for this approach to knowledge and learning emerged from ‘lessons learned’ through almost two decades of trying to weave Indigenous knowledge and mainstream science “within a collaborative, co-learning journey “Integrative Science.” Their purpose in developing the program is to make science curricula more appealing to aboriginal students by including Indigenous knowledge and ways of knowing side-by-side with mainstream knowledge in post-secondary science curricula. Two-Eyed seeing is focused on science education

curriculum, however, it can be widely applied to environmental education, social studies and English Language curriculum.

In this knowledge-weaving effort, Bartlett, Marshall and Marshall (2012, p. 4) recognize the importance of spirituality in Indigenous ways of knowing, and argued that “today’s mainstream knowledges and educational approaches are products of decades of diligent efforts to scrub spirituality and religion out of knowing and out of curricula – and keep it that way.” One of the co-authors Murdena Marshall (Bartlett, Marshall and Marshall, 2012), points out that although science can explain many things in the natural world, and Indigenous people value this knowledge, Indigenous people may combine this knowledge with assistance from the spirit world/realm. Furthermore, she notes that in the Indigenous worldview, one is a physical being as well as a spiritual being. In the context of my study, laid out in chapter three, this is consistent with Igbo beliefs that whatever happens in the physical originates from the spiritual realm. There is no doubt that the spiritual dimension of Indigenous knowledge, presents enormous challenge to weaving Indigenous knowledge into modern science curriculum, in that empiricist Western scientific knowledge upon which the science curriculum is based largely discounts the intangible or non-material.

In spite of this challenge, if Western scientific knowledge can discard its hubris and highhandedness towards other ways of knowing, Indigenous knowledge could in fact integrate with mainstream scientific knowledge in a meaningful way. For this to happen, Bartlett, Marshall and Marshall (2012) posit that integrative or complementary Indigenous knowledge and Western knowledge frameworks should acknowledge each other and engage in co-learning. In addition, the authors declare that ‘Two-Eyed Seeing’

provides multiple perspectives valued in many Indigenous epistemologies and can be illustrated as using one eye to see the strengths of Indigenous knowledge systems and ways of knowing while the other eye sees the strengths of Western knowledge systems. Hence, the two eyes together provide a far better view and enriched perspective of the world resulting in humanity's benefit and a better understanding of reality.

In theorizing the concept of Two-Eyed Seeing, Bartlett, Marshall and Marshall (2012) equally consider the importance of land and language, given the connectedness of Indigenous people to land, and language provides the means through which Indigenous knowledge is acquired and transmitted to the next generation. The authors concluded that 'Two-Eye seeing' is not a concept that is confined in any particular academic discipline, rather it is about a way of seeing life, which covers all aspects of our lives: social, economic, environmental, cultural, and others.

In supporting the concept of complementary or integrative epistemology, it is important to recognize the unequal power relations that exist between these worldviews/paradigms. In the so-called equal side-by-side relation/interaction of Indigenous knowledge and mainstream Western scientific knowledge, I do not envisage a mere add-on or listing of processes of Indigenous knowledge (Bowers, 2001), but a logical integration of Indigenous knowledge to the whole repertoire of knowledge to which students are exposed. For this reason, Two-Eyed Seeing will require decolonization as a critical framework to articulate the modalities of co-existence and also to critically interrogate unresolved power relations that may make this type of epistemological marriage problematic.

Similarly, elsewhere Hatcher, Bartlett, Marshall and Marshall (2009) advised that when using the Two-Eyed Seeing approach for Integrative Science programs, efforts should be made to avoid knowledge domination and assimilation by recognizing that the goal is to employ the best from both worldviews. They further argue that integrative science works well on a holistic interdisciplinary curriculum firmly rooted in place, hence, in order for Indigenous students to benefit from science education and environmental education, the crucial elements of complementary epistemology must include connections with the land, culture, and language. Unfortunately, today's Western scientific education exists in fragmented, disciplinary compartments, which rarely fit into Indigenous epistemological philosophy. It is most likely that minimal enrolment of Indigenous students in science programs may be a result of science not being as holistic as Indigenous knowledge (Hatcher, Bartlett, Marshall & Marshall, 2009; Cajete, 2000; Aikenhead and Ogawa, 2007).

In the preceding paragraphs, Indigenous environmental education is explored alongside science education. One of the criticisms often received is that both concepts are different, thus mixing them together shows a limited understanding of the concepts. In view of this, I argue that there is a thin line between Indigenous environmental education literature and science education literature, as scholars in both fields seem to explore both concepts simultaneously since they cannot be completely divorced from each other, especially in the Indigenous context. However, some authors explored above (Bartlett, Marshall and Marshall, 2013; Hatcher, Bartlett, Marshall and Marshall, 2009; Aikenhead and Ogawa, 2007), specifically examined integrative epistemology or the Two-Eyed Seeing in relation to science education. On the other hand, a few environmental education

scholars explore the concept of integrative epistemology from the context of environmental education. I now briefly explore their views on the concept of integrative/complementary epistemology or what others coin as Two Eyed Seeing.

McKeon (2012), writing in the context of Indigenizing environmental education, asserts that recent visions of environmental education include recognition that the well-being of humans and the environment are inseparable. This vision of environmental education, McKeon (2012) contends, focuses on interconnectedness, transformation, caring, holism, responsibility, connectedness to land, nature, and community, and has been the foundation of Indigenous education models since ancient times. Against this backdrop, McKeon (2012) argues that it is about time the field of environmental education draw from Indigenous education to enrich its goals, however, doing this entails incorporating the tenets of Two-Eyed Seeing integrative framework. An indigenized environmental education, McKeon (2012) argues, will incorporate story telling – a powerful Indigenous mode of education, and wholeness – including physical, emotional, intellectual, social and the spiritual aspects of being. Furthermore, indigenizing environmental education would benefit Indigenous students participating in mainstream environmental education because it acknowledge Indigenous perspectives, while benefiting non-Indigenous students by introducing alternative perspectives to them.

By the same token, Kapyrka and Dockstator (2012) hold that the tensions existing between Indigenous knowledge and Western knowledge in Environmental Education could be resolved by adopting the concept of “Two-World” approach, for the overall benefit of Environmental Education. A complementary epistemology (as in Two-World approach) will promote cross-cultural understanding while also involving the process of

decolonization, interrogating hegemonic Western ideas of knowledge and the colonization of Indigenous peoples and their land. They stress that a “two-worlds” approach to environmental education offers students and educators possibilities to expand their understanding of differences between Indigenous knowledge and Western knowledge, and this not only strengthens relationships between the knowledge systems, but also relationships of Indigenous peoples and settler populations. Consistent with complementary epistemology, Ritchie (2012), an Indigenous Maori scholar from Aotearoa (New Zealand), explores possibilities of integrating Maori perspectives within early childhood environmental education. In this work, Ritchie (2012) uses narrative inquiry to show how Maori cosmological worldviews could be integrated with early childhood environmental education within a bi-cultural educational setting. Ritchie (2012) stresses that integrating Maori’s worldviews in environmental education will enhance trans-generational transfer of Maori culture, thus leading to cultural renewal. Ultimately, Ritchie (2012) concludes that a sense of connectedness can be fostered by ensuring that infants and young children have the opportunity to experience patterns and sounds in the natural environment by playing together, and through these process children develop a sense of responsibility for the wellbeing of the environment, themselves and others.

While this narrative inquiry with teachers from diverse backgrounds provides some insights regarding how Maori Indigenous children could benefit from integrating Maori worldviews in early childhood environmental education, the question remains whether well-informed Indigenous Maori perspectives are fully represented or whether

the ideas of dominant group are being reinvented. It would have been helpful to segregate the perspectives of Maori teachers from non-Maori teachers in their findings.

In the foregoing analysis, I have explored complementary epistemology articulated or theorized under different names such as the integrative epistemological approach, Two-Ways, Two-Eye Seeing, Two worlds, and bicultural or bi-epistemic approaches. Whether in the context of environmental education or science education, and education generally, the central point concerns how Indigenous knowledge and Western knowledge can be creatively integrated so that fundamental Indigenous epistemological perspectives such as place-education, interconnectedness and connection to nature, and Indigenous language are up held in environmental education pedagogy. Epistemological plurality, as argued by its proponents, increases the relevance and applicability of knowledge and concepts for Indigenous students often alienated by the dominant Western scientific approach.

I now proceed to the exploration of place-based education.

Place-based education and locatedness

In this dissertation, I am also interested in how the geographical location (what I termed locatedness) of Igbos in Nigeria and elsewhere shape their Indigenous knowledge, cultural practices and language. For the purposes of clarity, I identify three groups of Igbos based on their location: 1) homeland Igbos living in south eastern Nigeria, 2) Igbos living in Nigeria but outside of Igbo land, and 3) diasporic Igbos living outside the country e.g., Toronto. Because I argue that locatedness of the Igbos matters in their

acquisition, retention, and trans-generational transfer of Igbo Indigenous knowledge and language, a discussion of place or land based education is pertinent.

Environmental educators have come to realize that the place in which people live and how they interact with their local environment is crucial in developing positive attitudes toward nature (Orr, 2004). It has been said that one cannot love what s/he doesn't know (Matsumoto, 2003), with relation to the fact that children may not develop positive attitude to nature if they are disconnected to the land and natural environment. Speaking from the Igbo context, and for many Indigenous people, education takes place by interacting with the land. Land in this sense comprises the forests, farm-lands, rivers, wilderness and the entire biosphere and the animals that live in them.

Gruenewald's (2003) critical pedagogy of place provides the framework to engage in critical reflection of place in the context of environmental education pedagogy. Gruenewald (2003) (later changed name to Greenwood) synthesized critical pedagogy and place-based education to create a critical pedagogy of place. Place-based education tries to connect learners with local, cultural, social and ecological aspects of their community, while critical pedagogy brings learners in tune with the power structures and decision making in education. Swayze (2009) observes that Gruenewald's critical pedagogy of place challenges educators to reflect on the intersection of culture, environment, education and particular places and communities. For environmental education to be relevant, it has to be situated within the context of the local culture, place, and ecologies. If it is not place-based, there is the possibility that adequate knowledge of local environment and problems such as erosion confronting such places as Igboland might not be properly tackled.

Gruenewald (2003, p. 9) asserts that a critical pedagogy of place seeks to:

Identify, recover and create material spaces and places that teach us how to live well in our total environments (re-inhabitation); and (b) identify and change ways of thinking that injure and exploit other people and places (decolonization).

I appreciate Gruenewald's use of the phrase 'total environment' in the sense that we perceive environment from a global perspective. Nevertheless, substituting 'total' with 'local' environment is more ideal given that human agency in relation to resistance, taking action, and advocacy begins from local communities. Charity, they say begins at home.

In order to reconnect or reacquaint urban Indigenous youths in the City of Winnipeg to their place and socio-ecological surroundings, Swayze (2009) developed an environmental learning program for youths called 'Bridging the Gap.' Recognizing that urban Indigenous children/youths do not have much opportunity to 're-inhabit' their land and explore their local ecologies, Swayze (2009, p. 3) focused the program on promoting awareness of the cultural and ecological benefits of natural areas and "encouraging stewardship of natural habitats within an urban setting." Some of the natural or native habitats explored within the city include wetlands, aspen parkland forest, and endangered tall grass prairies. Designed as a full day field trip, with guided exploration, the inner-city grade four students that were engaged in this program explored urban natural areas, engaged in discussions, hands-on activities and data collection. In this program, Swayze (2009, p. 8) recognized the importance of respectfully including Indigenous cultural worldviews by involving the elders in the outdoor field-trips to provide traditional cultural teachings, which presented opportunities to "rekindle traditional forms of intergenerational knowledge sharing."

In the course of reflecting on the program, Swayze (2009, p. 5) became intrigued by the “notion of “inhabiting” versus “residing” in a place” even though Swayze loosely interprets environmental learning as a lifelong journey that enables learners to inhabit a place. I equally find this concept interesting, however, I have a slightly different view. Residing in a place is likened to living in a place without being familiar with the local ecologies of the place, the history/story of the land and socio-cultural aspects of the place. For example, many people who reside in Toronto and its suburbs have not explored the Don Valley River and the Humber River that crisscross the entire GTA. Re-inhabiting in a place involves knowing intimately the local ecologies of the place and the stories underneath them. In this instance, having a full knowledge that the Humber River used to be an important means of transportation for social and economic networking amongst the Indigenous peoples that once lived around the GTA before European exploration / colonization (see Santin and Gallagher, 2003).

Furthermore, Swayze (2009, p. 11) argues that the problem with environmental learning is that it is grounded on the imposition of universal principles while ignoring the “particularities of varied *local* socio-ecological contexts” (my emphasis). While this is understandable, I think Swayze’s (2009) work with Indigenous urban youths is informative; however, a full day field-trip is not enough to fully understand how the program impacted on their notions of place and what outcomes produced desired transformation with respect to gaining knowledge of their local ecologies. I think more insight would have been gained from personal reflections of the students involved in the program.

Correspondingly, Scully (2012) states that Indigenous scholars have recognized the importance of place-based education as a necessary way of learning about Indigenous peoples and their place. Cultural and territorial education of the Aboriginal people is a crucial component of place-based education. Thus, Indigenous education should be centered on “Indigenous perspectives and knowledge of place for the purposes of living in a more socially and ecological conscious manner” (Scully, 2012, p. 156). Scully (2012) further argues that not only is place-based education a powerful and strategic pedagogical approach to encourage greater cross-cultural understanding between Indigenous peoples and non-Indigenous people, and to further social and ecological justice, place-based education, through experiential learning, has lasting effects upon students. Scully (2012) notes that when students were asked to identify an ‘overwhelming favourite classroom experience,’ a majority of them reported that their ‘local assignments’ were their most favourite because it was time spent on the land where they identify with a place and where they felt connected to their local Indigenous communities. I personally can relate to this. In the prologue of this dissertation I vividly recounted my mushroom picking experience in my tropical rainforest village with peers and relatives, an unforgettable experience with the land when I was ten years old. This shows how powerful place-based education through experiential learning activities can impact ones memory of a local environment.

In spite of its benefits, place-based education has been critiqued by environmental educators as shallow. Tuck, McKenzie and McCoy (2014) argues that it does not adequately acknowledge the injustice of settler colonialism, such as the stolen Indigenous land and resources of Indigenous people, and contend that the alternative should be land

education through a decolonization framework. They argue that place-based education has not gone far enough to connect how land is inextricably linked to the genocide committed against Indigenous people, and that colonial violence and oppression of Indigenous people is not explicitly acknowledged in place-based education.

In contrast, land education is critical of representations of Indigenous stories and teachings of land, instead disrupting “settler fantasies of becoming native” (Tuck, McKenzie and McCoy, 2014, p. 6, also see Korteweg and Oakley, 2014). Raising the question: “Why land education in place of place-based education?” Tuck, McKenzie and McCoy (2014, p. 6) argue that unlike place-based education, land education offers possibility for a “counter-narrative of how environmental education might enter into more respectful relations with Indigenous peoples in protecting Indigenous lands.” This is consistent with what many other Indigenous scholars have argued (see Swayze, 2009; Root, 2010; Scully, 2012; Simpson, 2002). Indeed the majority of land property in Canada and other settler countries (see the Tuck, McKenzie and McCoy, 2014, for a detailed exploration of different kind of colonialism) is owned by white settlers, leaving Indigenous peoples without lands or at best in reserved settlements. Most mainstream environmental preservationists and so-called ‘tree huggers’ that have fallen in love with Indigenous land must acknowledge that the land they desire to protect or preserve belongs to Indigenous people, and so it is important that they reflect on the social injustice done to Indigenous people.

With this in mind, environmental education that stresses place-based education is helpful, however, there should be greater emphases on ‘pedagogy of land’ (Styres, Hiag-Brown, and Blimkie, 2013; Cajete, 1994; Lowan, 2009), which embodies the spiritual,

emotional, intellectual and cultural aspect of land and not just the material. Again, the rootedness of Indigenous languages in land (McCarty and Nicholas, 2014) makes land education extremely important, as land provides the contact point through which Indigenous knowledge and language are learned through experiential interaction with the land.

The point often overlooked is that colonial historical accounts of early European settlers seizure of Indigenous land is narrated in a pleasant way to their audience, while carefully obscuring the fact that in trying to seize the land, Indigenous people resisted it fiercely and were exterminated in the process. The value of Land education is to promote decolonized understanding of Indigenous lands and cultures (Whitehouse, Watkin-Lui, Sellwood, Barrett and Chigeza, 2014).

In the following Chapter 6, I explore how location or place where Igbos live shape the acquisition of Indigenous knowledge and language. The discussion generally examines the disadvantages Igbo people faces as a result of living away from their native environments. I defer the detailed discussion until that Analysis and Discussion Chapter.

Chapter Three

Indigenous Sustainability: “The Firewood of a Place Cooks the People’s Food”

Igbo Indigenous sustainability

The term “sustainability” is a convoluted word; I prefer to use the word “well-being” in the context of *Ubuntu* and communalism in Africa (Venter, 2004), which better expresses the feelings of the Igbo in their natural environment before “things fall apart” to borrow from the title of Chinua Achebe’s novel. In *Things Fall Apart*, the world of Okonkwo, the protagonist, falls apart; the harmony and the well-being he associates with his natural environment and culture disintegrates because of the new ways of doing things introduced by the colonizers. He resists this force, but eventually it leads to his demise. This allusion to *Things Fall Apart* foregrounds my discussion of Indigenous sustainability in the context of Igbo society. The Igbo have done things in their own peculiar ways, from living in harmony with their local ecologies to producing their own knowledge through interaction with their environment: including Indigenous food and medicine, subsistence farming and local technologies. Indigenous knowledge and culture were sustained through community participation and the intergenerational transmission of cultural capital through knowledge and language (see Afigbo, 1975).

The Igbo metaphor or adage “the firewood of a place cooks the people’s food” offers an insight on how sustainability should be viewed given that every community has a particular way of living meaningfully in their local environment. Igbo sustainability consciousness is illustrated in community development projects such as “*igbu nkwu*” – the harvesting of palm fruits from the palm tree – carried out every three full moons, and every able-bodied man and woman is expected to participate. The palm tree fruit, from

which palm oil is produced, is a cash crop in south-eastern Nigeria, and the humid rainforest climate of the region supports its production. The communal *Igbu nkwu* is a symbolic community project. The production of palm oil is a very arduous task, which involves a division of labour amongst the old and the young as well as the male and the female. It also involves different processes. First, the elders in the community in conjunction with the *umunna* (*the* patriarchal village leadership organization, democratically constituted to run the community's affairs) decide when *igbu nkwu* is needed based on the needs of the community. The skilled young men in the community climb the trees to cut the hard, red fruits clustered in bunch, with special instruments. The communal palm harvesting takes upward of seven market days. After a laborious working day, the young men and women who participate in the harvesting and gathering of the palm fruits are treated to a sumptuous meal.

While these tasks are performed, there are moments of music, dance, performances and rituals. The bunch of harvested palm fruits are distributed or shared according to hamlets. The farms or forests from which they are harvested are communal lands, and as such, the resources are shared among members of the community or sold to raise funds for the development of the community. Memories of my childhood visits to my maternal grandmother include the process of palm oil extraction following harvesting. First, the fruit is allowed to ferment for a few days, and then it is boiled in very large cooking vessels. It is then pounded or crushed in large receptacles known as mortar by energetic young people, which helps to loosen the juicy, oily flesh from the hard palm kernel seeds. The oil is then manually pressed out from the mashed flesh. The sustainability consciousness or mindset of traditional Igbo society ensures that no waste

is produced in the process of palm oil extraction. The dried palm fronds are used for firewood for cooking, and the potash from the burned palm fronds and the chaff of extracted fruits are used to produce soap. The hard kernel seeds are broken and the seeds are processed in to palm kernel oil, which is as highly valued as palm oil. After the oil is extracted from the hard kernel seed, the remainder can be used for feeding chickens and livestock. The hard kernel seed can be applied on the soil to prevent erosion. No part of the plant is wasted.

During the colonial missionary education of the mid-20th century and even up to independence, young men identified as bright by their communities were sponsored to Britain or the United States to further studies. These funds were raised from *igbu nkwu*. The practice varies slightly from community to community in Igbo land, but, essentially, the main purpose of *igbu nkwu* is community development. In typical Igbo sense, community development is a process through which resources are harnessed to build infrastructure and human capacities by way of collective efforts in a community. The illustration above is just one aspect of Igbo Indigenous sustainability, however, there are other cultural practices that promote sustainable lifestyles and ecological sustainability. While I acknowledge the arduous nature of these processes and the lack of convenience inherent in this way of life in comparison with Western capitalist standards, the bottom line is that these practices allowed people to find satisfaction in the ways they lived their lives and experienced their world within their local ecologies.

Against this backdrop, following the steps of Robottom (2004) and Gore and Gore (2004), I agree that sustainability should be grounded in the local context. What works for one group of people might not work for another. Further buttressing this argument,

Dei, Hall and Rosenberg (2004) assert that the idea one's view of reality is the only reality is a dangerous delusion.

Having employed an Igbo metaphor to justify local grounding of sustainability, in this Chapter, I argue that Indigenous epistemologies sustained the environment as well as the social and economic lives of Indigenous communities (although at a very subsistence level) for centuries prior to colonialism and modernity. Consequently, these systems should be conceptually integrated into international discourse and strategy for sustainable development. Furthermore, I argue that a culturally relevant Igbo Indigenous environmental education would promote knowledge of the physical environment, which has sustained Igbo society for centuries. Unfortunately, capitalism and Western influences spreading like wildfire through Igbo lands, have undermine collectivist traditions like *igbu nkwu* that once sustained Igbo culture and Indigenous knowledge.

The rest of this chapter offers a brief exploration of the meaning of Indigenous knowledge from the African perspective. I narrow the scope to Africa, because a broader meaning of Indigenous knowledge including perspectives from Native People in Canada has been briefly discussed earlier. An African view of Indigenous knowledge provides the basis for understanding sustainability from the African point of view. I then explore the Igbo worldview, showing the impacts of colonialism on Igbo ways of life. This is followed by a brief historical overview of colonialism in Igbo land. In the introduction of this dissertation, I problematized colonialism as contributing to undermining the preservation of Igbo Indigenous knowledge; I now however, present a detailed analysis of the trajectory of colonialism and Christianity in early Indigenous Igbo society, and recently Pentecostal movements in contemporary Igbo society. I argue that the dual

processes of colonialism and Christianity contributed immensely to disintegrate Igbo collectivist culture and have far reaching implications for Igbo Indigenous knowledge preservation and sustainability. This conversation is followed by a brief exploration of the Igbo language and Indigenous sustainability, in relation to the implications of the declining use of the mother tongue in contemporary Igbo society.

Indigenous knowledge from the African perspective

I examine Indigenous knowledge from the African perspective by using the co-edited work of George Dei (and his colleagues) and Soul Shava. Both scholars are Africans. Dei is located in the West at the University of Toronto and Shava teaches at a university in South Africa. Dei, Hall and Rosenberg (2002, p. 6) conceptualize Indigenous knowledge as:

A body of knowledge associated with the long-term occupancy of a certain place. This knowledge refers to traditional norms and social values, as well as to mental constructs that guide, organize, and regulate the people's way of living and making sense of their world. It is the sum of the experience and knowledge of a given social group, and forms the basis of decision making in the face of challenges both familiar and unfamiliar. For millennia, many indigenous cultures were guided by a world view based on the following: seeing the individual as part of nature; respecting and reviving the wisdom of elders; giving consideration to the living, the dead, and future generations; sharing responsibility, wealth, and resources within the community; and embracing spiritual values, traditions, and practices reflecting connections to a higher order, to the culture, and to the earth.

The Igbos, like most African Indigenous cultures, as pointed out in the quote above, have a set of worldviews that determine their relationship with nature, fellow humans and a higher cosmic power. The sacred earth in which the Igbo reside is treated with respect; fellow humans are also treated with respect, and a higher being that reflects its existence

in nature/creation is accorded an awesome respect. For the Igbo, this Supreme Being is referred to as *Chukwu*. A deeper explication of this concept is provided further below in this section.

Shava (2011) avoids giving a precise and prescriptive definition to Indigenous knowledge, but rather focuses on the things that characterize Indigenous knowledge, mainly people i.e., context (place and time), culture, language, knowledge and practices, and dynamism. He notes that knowledge of Indigenous people and cultural rituals are inter-generationally shaped, passed from generation to generation through narratives, oral stories and cultural art forms such as folklore, songs, poetry and dance. Language, Shava (2011) also indicates, is an important medium through which Indigenous knowledge is represented and transmitted. When the language is lost, how can younger generations possibly connect and interact with their culture and environment? How will they know the medicinal value of a plant they have not heard of? Shava (2011) observes that Indigenous knowledge is heterogeneous because it is derived from different locales and communities, and even though it is rooted in history, Indigenous knowledge is reflexive to changes over time both within communities and from external influences. Therefore, Indigenous knowledge is not static, stagnant or closed, but constantly evolving and being transformed, created and recreated (Dei, Hall and Rosenberg, 2004; Masuku, 1999; Masuku van Damme and Neluvhalani, 2004; Njoki Nathan-Wane, 2002; Shava, 2011).

As Ekechi (1971, p. 104) observes, Igbo Indigenous knowledge and culture are constantly evolving and dynamic, as Igbos are “remarkably receptive to changes and their positive response to innovation.” The Igbo inclination for innovation makes it easy for

them to adapt to Western ways, and this has implications for the shifting worldviews of the Igbo people.

The Igbo worldview and paradigm shift

A discussion of the Igbo worldview will help us to appreciate the spirituality of Igbos and their belief system, which guides their relationships with fellow humans and the physical world. The spirituality of the Igbo is anchored in the supremacy of a higher being, known as Chukwu. Chukwu is the creator of the universe and of everything that exists therein (Afigbo, 1975; Ilogu, 1974; Agbedo, 2007). However, next to Chukwu are other spirits and deities or gods; namely, Anyanwu (the sun god), Igwe (the sky god) Amadi-Oha (lightening) and Ala (the earth deity) (Ilogu, 1974). Besides, there are personal gods ‘Chi,’ ancestral spirits and other minor spirits. The Igbo believe that the Supreme God Chukwu supervises the activities of all these other gods and deities (Agbedo, 2007). Every individual is connected to this Supreme Being through his or her personal “Chi” – the spiritual component of a human being. Your “chi” can bring you good or evil depending on how fair or unfair your actions are to fellow humans and nature. An evil person must eventually reap the evil s/he sows, while good is rewarded. For instance, the Igbo believe that if a person is evil, that person is not fit to be a human being; for that reason, the individual may reincarnate as an animal in his/her next world, which also affirms Igbo believe in reincarnation. Prominent in Igbo spirituality is the invocation of ancestral spirits through the pouring of libations with palm wine and the offering of kola nuts. In most traditional ceremonies, the Igbo invoke Chukwu, Ala or Ani - the earth goddess; and ancestral spirits for blessing.

Fairness and justice, community participation, and sharing responsibility are the core value of Igbo philosophy. These find expression in the following Igbo sayings:

Igwe bu ike – strength lies in the majority

Onye ayala nwa nneya – do not leave your kinsman behind when life is treating you fine.

Umunna bu ike – my strength is in my extended family.

These Igbo adages resonate with the Zulu's notion of *nbutu* (Venter, 2004), which means "I am a human because of another human being." Every member of the community has access to the resources in the forests, and individuals harvest the resources sustainably by adhering to the community rules for sustainable resource use, as the *Igbu nkwu* (communal palm oil production) illustrates. Historically, there was minimal or no waste of resources. Communities shared their wealth and resources, and wanton accumulation, materialism, greed and avarice were not much of a problem in traditional Igbo society. However, as a result of historical intrusion of the West by way of colonization, the Igbo worldviews have undisputedly undergone distortion, and this in no small measure has hampered Igbo cultural and ecological well-being (Nwoga, 1981).

Regardless of this historical tragedy and the bemoaning of the lost treasure, I think Igbos should start re-creating their world as a melange of the Igbo Indigenous and Western worldviews – an interesting pastiche for the socio-cultural and ecological well-being of Igbo communities. In reality, the Igbo world is already a mixture of these cultures. That is to say that Indigenous knowledge is very dynamic and evolving (Dei, 2002; Masuku, 1999; Masuku van Damme and Neluvhalani, 2004; Njoki Nathan-Wane, 2002; Shava, 2011). As we speak, Igbo traditional marriage, burial and naming ceremonies, masquerades, and land use rituals are in constant transformation, but I argue

that even as these traditions continue to shift, participants in these traditional ceremonies continues to derive joy and sense of belonging and purpose in their existence. For instance, Christianity is infused in Igbo traditional marriage, naming ceremonies and other rituals, and this interesting intersection has both complemented and conflicted with Igbo traditional culture in a complex way. I now provide a historical account of colonialism and Christianity in Igbo land and how they influenced and corrupted Igbo traditions.

Colonialism and the early missionary period in Igbo land

I now speak of colonialism more specifically in the context of early missionary activities in Igbo land. I explore colonialism in Igbo land because it is a profound encounter that has distorted the collectivist traditions, spirituality and worldview of the Igbo and how they interact with their local ecologies.

Colonialism in Igbo land is actually the extension of British political authority into its territory. However, records reveal that Christianity (via Christian missionaries) had already made incursions into Igbo territory (Ekechi, 1971). Since Igbo territory is located in the hinterland, far away from the coastal regions, the first Christian missionaries in Igbo land arrived around 1857 (Ubah, 1988; Isichei, 1970; and Ekechi, 1971), much later than in coastal Nigeria. Before I explore this further, let's hypothetically ask this question: What is the basis of Igbo worldview and how has Christianity impacted on it? Well, I must say that spirituality is the basis of Igbo worldview. Ubah (1988, p. 1) writes:

Igbo traditional religion was a way of life which involved reciprocal rights and obligation between the material world of the Igbo and the immaterial

world of the spirits, the objective being to maintain harmony between both worlds, ensure peace and prosperity for the people and the survival of their lineage through time.

Thus, spirits, or the immaterial world, is a major aspect of Igbo Indigenous knowledge and philosophy and in that way influences how they interact with their environment. This corresponds to what Cajete (1994, 2000), McGregor (2004), Simpson (2004) and Castellano (2000), among others, have pointed out in relation to Canadian aboriginal spirituality. The philosophy of Igbo traditional religion is founded on three pillars: – the Supreme Being, divinities, and ancestors (Ubah, 1988). Some scholars, notably Western anthropologists, argue that the concept of a Supreme Being is alien to Igbo land and therefore, a construct of Christianity. However, some Igbo scholars argue that Igbos always had the concept of a Supreme Being – Chukwu. That said I am aware that Christianity is associated with monotheism, while the argument is usually that Indigenous spirituality allows for more than one “god” or polytheism. Whatever be the case this dissertation does not engage this theological debate, as I do not have the expertise in the subject. Therefore, proceeding with our discussion, ancestral spirits (*ndi ichie*) are also known to protect their living children and members of the community. One can also evoke the wrath of these ancestral spirits with evil behaviour. Across Igbo land, communities appease many deities and divinities with a number of variations. However, it is worth noting that Igbo spirituality, which Christianity dislocated, used to be the cosmological view through which culture, knowledge, ecology, nature, and well-being are understood. That said I must point out that a significant number of Igbos, still view the world from Igbo cosmological point of view. While some argue that Igbo beliefs and spirituality appear to have strong resonances with Christianity, however, when placed

within Indigenous epistemology, they are radically different, and this could be the reason why some people continue to find fulfilment in the culture/traditions in spite of the adulteration.

Christianity came to Igbo land through missionary evangelism. It is on record that traditional Igbo society vehemently resisted Christianity; it was a clash of religions. Ekechi (1971, p. 103) observes that the Igbo did not consider the “‘regenerating power’ of Christianity (as preached by the missionaries) relevant to their needs”. Igbos believed that “their traditional religion was better for them than ‘this new religion.’ Most Igbo people at that time listened to missionary ‘propaganda’ but remained outside the Christian church,” Ekechi (1971) notes. He (ibid, p. 101) contends that those who embraced the new religion prior to 1900 were mainly people who had been alienated from or at the margins of Igbo society or suffered from “certain social disabilities or experienced certain natural misfortunes.” In consonance with this view, Isichei (1970) suggests that Igbo responses to Christianity or mission teaching depends on a variety of factors such as age, sex, status in the community and individual personality. For example, individuals designated as *osu* (a despicable discriminatory caste system instituted in traditional Igbo society against fellow humans) responded more positively to colonial missionary education than the rest of the people because they were discriminated and excluded by the rest of the people; they thus had nothing to lose if they joined Christianity. Ironically, the discriminated suddenly became elevated in social and economic status as a result of acquiring western colonial education.

As time went on, broad indifference to the new religion “changed dramatically to a mass movement” (Ekechi, 1971, p. 103), and it became very fashionable to be called a

Christian. The question is what brought about this dramatic change in attitude towards Christianity?

Following the British military occupation of the Igbo country, the political and social disruption that ensued led to an unsettling social environment in Igbo land. The British were engaged in rampant military patrols in the Igbo villages where “...the soldiers molested the villagers, seized their livestock and often ravaged their crops” (Ekechi, 1971, p. 104). Entire villages were subjected to military expeditions and exploitation, and those who enjoyed some sort of protection from this military harassment were the Christians. Ekechi (1971) points out that early converts were immune from harassments during these episodes of military mistreatment by the British officials. The villagers suddenly realized that it was becoming honourable to be identified as a Christian or associated with the Mission churches. Igbos, being receptive to change and quite innovative in nature, quickly reassessed their comparative advantage if involved in the new religion.

Subsequently, those located at the margins of Igbo society that embraced Christianity started to obtain some reward from it. It is important to note that the missionaries built schools for the converts. Until the 1970s, the missionaries were responsible for more than 80 percent of the education in Southeast Nigeria, and those who passed through mission schools, though with little education, became court clerks, catechists, typists, store clerks and cashiers (Ekechi, 1971). This group of educated people became very important in the community, thus the beginning of a new class.

Young Igbo men embraced Christianity in an attempt to avoid harsh colonial forced labour such as building roads and government stations and quarters, and carriers of

white colonial masters (Ekechi, 1971). The emergence of the new elites showed that association with this new idea could actually be profitable; and such views attracted young men to Christianity. This brief historical account of Christianity in Igbo land provides some insights into why Christianity spread like wildfire, dismantling socio-cultural collectives in traditional Igbo society. Because of this, Christianity is arguably the most remarkable socio-spiritual movement to ever have changed the course of Africa. More recently, this wildfire has metamorphosed into the Pentecostal movement in Igbo land.

The Pentecostal movement in Igbo land

As stated, originally Igbos were not receptive to Christianity, but that quickly changed when people began to associate Christianity with freedom from harassment by British forces and with the newfound social recognition of the very early elites who were products of missionary schools. The Protestants, particularly the Church Missionary Society (CMS) and others, like the Presbyterian Church, were already in Igbo land. The Roman Catholic Church, though considered a latecomer to missionary activities in Igbo country, succeeded in challenging and gaining more support than the prevailing Protestants, partly because of their belief in reaching people through building mission schools (Ekechi, 1971). Although the Protestant missionaries were building schools too, they were not as vigorous in building schools as the Roman Catholic Church.

There was a great deal of competition amongst missionaries in terms of winning converts and outdoing one another. The bait for the Igbos to convert to Christianity, one can argue, was the materialism, safety and social recognition gained by converting to

Christianity in those early times. But in recent times, why are Igbos overwhelmingly responding to the Pentecostal movements? I attempt to provide a nuanced analysis of this phenomenon. Igbos by nature are very spiritual people. Earlier in this sub-section, I established the inseparability of Igbo Indigenous or traditional knowledge and culture with spirituality. When the early missionaries broke down the spiritual and cultural ties binding Igbo society together, a void was created that could not be filled with Christianity, the new form of spirituality. The question is what is the void and how did Pentecostal churches fill these needs specifically? Since it is in the nature of Igbos to gravitate towards spiritual pragmatism and living in the moment, any religion that does not grant protection and material benefits to worshipers may likely not align with their philosophy. In contemporary Igbo society, it is no longer socially acceptable to seek protection from a “juju man” (African traditional witchcraft, with supposedly diabolic powers), even though most people surreptitiously visit these “juju men”. For example, some Igbos are believed to belong to one or more secret cults to protect them from detractors and presumed enemies. The traditional churches - Catholic, Anglican and Methodist do not seem to offer instantaneous, tangible protection, and thus people in contemporary Igbo society are seeking it in the Pentecostal churches. It seems the Pentecostal churches fill these needs by promising instantaneous benefits to their followers through ritual practices similar to Igbo traditional religion. For instance, one is sick because someone is responsible for it or maybe one’s sin is the cause of the sickness. Or a person’s misfortune is because of his/her sin or someone envious of the persons might be responsible for it, and for one to receive instantaneous healing or deliverance, that person must propitiate or offer a sacrifice.

Furthermore, some African scholars suggest that the reason why traditional Christian Churches did not appeal to Africans and hence the gravitation towards Christian Pentecostalism is because the traditional Churches failed to express Christianity in the African way (Abu, 2013). Abu (2013) further argues that the success of Pentecostal churches is that African traditional spiritual beliefs /practices appeared to be embedded in Pentecostal expressions. This position is similar to what Ezenweke (2013) characterizes as Indigenization of Christianity by Pentecostals such that the Christian God is now seen in the same light as the African gods, where most misfortunes are interpreted as punishments from God.

The history of the Pentecostal movement in Nigeria began in the late 1960s and early 1970s (Abu, 2013). It started in Yoruba land, mainly because the Yoruba were the first people within what is now Nigeria to come into contact with the missionaries. Their early contact with the missionaries also made them the first educated people in Nigeria. Notable Pentecostal movement figures in Nigeria are mainly Yoruba: Pastor Kumiyi, of the Deeper Life; Pastor Adebayo, of the Redeemed Christian Mission; Pastor Oyedegbo, of the Winners Chapel; and Pastor Olukoye, of the Mountain of Fire Ministries. There are a few from Igbo land, such as Dr. Emma Ukpai, a renowned evangelist, and the south-south region of Nigeria also has a handful. At the moment, there are millions of Pentecostal churches in Nigeria and many more mushrooming on every street corner. Their support base is increasing daily. In my opinion, the reason that the Pentecostal movement is spreading is because it offers people false hope of protection from poverty and disease, as well as material prosperity. This spiritual vacuum was not filled by the traditional (Catholic, Anglican and Methodist) churches. As a result of poverty, hunger,

and insecurity, people are enticed or driven into these Pentecostal churches where they will presumably get all their material needs met as well as protection and healing. There are sincere ministers in these movements, but the majority prey on the ignorance of the people. Many have argued that these so-called ministers have inflicted much injury upon their congregations. There are accounts of people who died needlessly from very simple and treatable illnesses because their pastors said they would be healed by doing something absolutely unreasonable and outrageous.

Some aspects of Igbo Indigenous knowledge and culture, which withstood the assault of colonialism and early Christian missionaries, are now being broken by the Pentecostal movements.

This overview of missionary history in Igbo land is by no means an elaborate exploration of the history of Christianity and colonialism in Igbo land, however, it offers insight into the experiences of the Igbo under British colonialism and how the concomitant ideology – Christianity, and recently, the Pentecostal movement – have weakened Igbo cultural institutions and traditional beliefs.

Language and Indigenous sustainability

Shava (2011) rightly notes that language is the vehicle through which values, knowledge, traditions and cultural norms are transmitted from one generation to another and without this intergenerational transmission, a culture will not thrive for long. According to the United Nations, most Indigenous languages are endangered (Johnmary, 2012; also Adegaju, 2009; Romaine, 2007). By the same token, Igbo language is in decline (Igboanusi, 2006; Uwalaka, 2001; Ugorji, 2005), which has far-reaching consequences in

the preservation of Indigenous knowledge, collective identity, and overall well-being of the Igbo people. A declining language may result in the loss of fundamental features of a culture and perhaps lead to distortion or a complete loss of the people's Indigenous knowledge (Agrawal, 1995). The declining use of the Igbo Indigenous language (and other Indigenous languages) perhaps can be traced to colonial missionary education, which purposely deemphasized Indigenous languages in order to promote a Eurocentric agenda (Fafunwa, 1974; Dei, 2004; Adefarakan, 2011). Stressing the importance of Indigenous language, Dei (2004, p. 205) writes:

There is awareness that language is significant for the maintenance of cultural identity. Cultural identity is part of defining the Indigenous sense of self and personhood. Language carries cultural values and collective identities as well as social and ancestral histories.... It is integral to Indigenous knowledge.... The language, the culture and the natural world are interconnected physically, intellectually, emotionally, and spiritually.

In addition, Njoki Nathani Wane (2002) asserts that language is an important aspect of a community's history, and when it is distorted or lost, the stories that convey Indigenous knowledge may be lost. By the same token, Masuku Van Damme and Neluvhalani (2004, p. 367) thoughtfully aver that "the understanding and identification of appropriate solutions to certain local environmental issues can be enhanced if curriculum and teaching strategies are to encourage Indigenous ways of knowing and mother tongue interaction."

The severity of the loss of Igbo language is such many Igbo cannot adequately communicate in their language without adding English here and there. The inability to effectively communicate in Igbo is even more severe with the younger generations. Many Igbo youth can hardly name or recognize any Indigenous plants or their uses. The reason

is at least two-fold: a lack of parental interest and participation in Igbo language development, and raising children outside of Igbo land.

Due to the scarcity of industries in Igbo land, Igbos migrated to other parts of Nigeria in search of greener pastures, such as Yoruba land (Western Nigeria) and Hausa land (Northern Nigeria, with strong ties to Islamic culture) (Onwubu, 1975). In order to integrate into their host environment, they learned the language of their host tribes, and the children they raised in these places also speak these languages. This, however, represses Igbo language, thus presenting serious challenge to the survival of the Igbo language. It is not uncommon to see adult Igbos who have always resided in Nigeria, but are unable to understand the Igbo language. Thus, many Igbos currently in Nigeria, not to mention the second generation of diasporic Igbos, are unable to speak their mother tongue. Valuable Indigenous knowledge and environmental education practices are lost due to the lack of language skills or vocabulary to express such phenomena. Local and Indigenous environmental management practices essential for ecological sustainability are alien to many young people (Eze and Mba, 2013; Ezeudu and Nkokelonye, Ezeudu, 2013). Indeed, language and the appreciation of a bioregion are complementary.

Well-meaning and concerned Igbos are very perturbed by this near endangered status of Igbo language, and as a result, some cultural and social groups are initiating recovery projects in Igbo communities. For instance, in Toronto, the Igbo Community Cultural Association has partnered with The Toronto Catholic District School Board to teach the Igbo language to Igbo children on weekends (every Saturday). This development is not unique to Igbos in the diaspora; in Igbo land, too, some social and

cultural organizations are making similar efforts to encourage Igbo language. However, this effort has achieved poor results because it is not well-coordinated.

Similar trends have been observed in South Africa. For instance, in a research study about the place of Indigenous knowledge and cultural practices in science in a rural community in KwaZulu-Natal, Keane (2008, p. 593) observes the gradual erosion of the Zulu language:

This lack of knowledge by young people seemed to extend to the natural environment. During walks through the village our young companions could not name trees or say what they were used for.

If the above is not sufficiently alarming, a local Zulu Chief made a more pronounced acknowledgement of the erosion of local languages in Africa:

Today, my own children can neither identify the antelope and the waterbuck nor name them in their own languages. They cannot identify a single indigenous tree or shrub with its uses and values to humans.... Africa has changed (Chief Minister, Enos Mabuza, Wilderness spokesman, 1982,p. 43, cited in Keane, 2008, p. 593).

In addition, Odora Hopper (2002, p. 7) also warns that “the erosion of a people’s knowledge associated with natural resources is under greater threat than the erosion of natural resources themselves.” The foregoing is a testament that Knowledge is transmitted through language, and with the loss of language, valuable knowledge is lost too, including knowledge about natural resources and their use. Asgharzadeh (2008, p. 350) articulates the important place of language in pedagogy and learning in the following:

One’s natural environment is the world within which one is rooted. In this environment, one encounters on a daily basis issues related to economic, political, cultural, and psychological survival. To make sense of these issues, one needs a

language, a voice, and a means of communication by way of which one is able to articulate one's conditions.

Based on the abovementioned relationship between language and Indigenous knowledge preservation, I argue that the teaching Igbo language in schools is a way of ensuring the preservation of Indigenous knowledge and Indigenous resources, moreover, research has shown that academic programs grounded in the local knowledge and language of the people tend to benefit Indigenous students (Dei, 2004; Gore and Gore, 2004; Robottom, 2004; Ruiz et al, 2009; Schroder, 2008). Indigenous Igbo environmental education, proposed in this research, is one rooted in Igbo language and provides opportunity for children to cultivate meaningful relationships with nature and at the same time promote Igbo language skills.

I conclude this subsection with Romaine's (2007) argument that a culturally-based environmental education rooted in the local ecosystem is crucial for language maintenance as well as promote linguistic diversity amongst Indigenous peoples of the world; achieve holistic ecological planning, empowering Indigenous people and promoting sustainable development, and reverse the trend in the decline of Indigenous languages.

Chapter Four

Indigenous environmental education in pre-colonial Igbo land

Every society, whether simple or complex, has its own system of educating and training its young (Fafunwa, 1974). Education in traditional Igbo society was guided by the principle of functionalism, meaning that it served to make the learners useful to the society, and most traditional African education was delivered through active interaction with the environment; in other words, education and environment were inseparable.

As Fafunwa (1974) rightly notes, education was mainly employed for induction into society and preparation for adulthood, Igbo traditional education therefore aimed to prepare people for social responsibility, community and political participation, vocational training, as well as to instil spiritual and moral values. According to Fufunwa (1974), young people learned through ceremonies, rituals, initiations, age-grade activities, and recitations. Young adults and youth were engaged in practical vocational education and skill-learning such as farming, fishing, weaving, carving, knitting and animal husbandry. Physical and recreational components of traditional education included wrestling, dancing, drumming, and acrobatic physicality, while the study of local history, legends, the environment, plants, animals, local geography, reasoning, poetry, riddles, proverbs, and story-telling were in the intellectual domain of Indigenous education (Fafunwa, 1974).

Secret cults and age-grades served as institutions of higher level Indigenous knowledge. It is in the secret cult that secret powers were acquired, and native science, philosophy and religion were mastered. It is also important to note that African traditional education is not rigidly compartmentalized as in the Western knowledge system and its

separate disciplines. This is demonstrated in Abdou Moumouni (1968) assertion that Indigenous education is intimately tied to social life and the natural or physical environment as well as to the spiritual.

So far we have seen the different modes of Igbo Indigenous education, and how Indigenous education is tied to the social life, natural environment and the spiritual life of the people. The rest of the chapter hence explores the role of socialization in relation to Igbo Indigenous education. In view of the fact that Igbo Indigenous environmental education is examined in the broader context of environmental education, I will briefly trace the historical development of the contemporary environmental education. After this, I explore the benefits of framing environmental education curriculum in way that it aligns with local initiatives. Since there are competing environmental initiatives in a local community, I will explore the possibilities of conflicts arising as a result of ideas emerging from individuals with divergent environmental interests and views. This is followed by an exploration of the link between Indigenous environmental education and human-nature relationship, and what contemporary environmental education could borrow from Igbo Indigenous environmental education in the context of improving human –nature relationship. Finally, I present a brief critique of the current modern liberal education while arguing for decolonization of education in order for the Indigenous people to reconnect back to their culture, language, land and local ecologies.

Education and socialization in traditional Igbo society

The education of the child begins with the immediate family and the extended family, and then it extends to the community and the age-grade. When children are four or five years

old, the extended family members, i.e., grandparents, uncles, aunts, and cousins, become involved in their education. The extended family sends the children on errands, tells them stories and teaches them obedience and respect. Respect for elders is an important aspect of traditional education, because the Igbo, like other groups in Africa, highly value such respect. There is an Igbo adage that says, “He/she who does not respect the elder will not live long to be an elder.”

Equally important in the socialization of children is the age-grade. By fourteen to sixteen years of age, or sometimes earlier depending on the particular community, the age-grade begins to play an active role in both education and socialization. Farming, community participation, environmental education and certain aspects of secret knowledge are coordinated by the age-grades. Age-grades are also involved in masquerade, dancing and cultural knowledge. Behavioural patterns and the skills and abilities required for effective citizenship and community participation are acquired as one participates in age-grade informal learning activities. In fact, as Fafunwa (1974, p. 5) rightly observes “the traditional African educational system finds expression in the age-group or age-grade associations.”

Fafunwa (1974, p. 7) identifies six cardinal goals of traditional African education and these include: 1) the development of the child’s latent physical skills; 2) the development of character and inculcation of respect for elders and those in positions of authority; 3) the development of intellectual skills; 4) the acquisition of specific vocational training and to develop a healthy attitude towards honest labour; 5) the development a sense of belonging and active participation in family and community

affairs; 6) the understanding, appreciation and promotion of the cultural heritage of the community at large.

These cultural skills are, however, acquired through various modes of socialization in the Indigenous society. For instance, at a very early age, African children begin to explore their immediate environment by observing adults activities in the natural environment, and by so doing, they develop a nurturing relationship with the physical world and skills to thrive in their natural environment. Character, vocational training and appreciation of cultural heritage are equally developed in the process of engaging and interaction with the natural environment.

One can thus argue that in spite of the reality that traditional Igbo society had informal ways of education via the socialization agents/traditional institutions, the purpose of education, nonetheless was geared towards functionality in their environment. In view of this, Fafunwa (1974, p. 3) states that education:

...is the aggregate of all the processes by which a child or young adult develops the abilities, attitudes and other forms of behaviour which are of positive value to the society in which he/she lives; that is to say, it is a process for transmitting culture in terms of continuity and growth and for disseminating knowledge either to ensure social control or to guarantee rational direction of the society or both...When evaluating any educational system, one must determine the extent to which it is meeting the needs of a particular society at a given time.

Regardless of the fact that Indigenous education does not manifest the same form of rationality as Western knowledge, it is functional because it served the cultural needs of Indigenous societies, although biases and misunderstandings about Indigenous knowledge linger on.

The historical development of environmental education

Having examined the Igbo Indigenous environmental education, I now explore the broader context of environmental education by way of tracing the historical development of contemporary Western environmental education. I must acknowledge that this is a brief history of environmental education and a particular perspective, it thus does not represent the viewpoint of all environmental educators. According to McCrea (2006), the roots of environmental education are widespread and diverse. There are insinuations that environmental education owes its origin to the influence of philosophers such as Jean-Jacques Rousseau, who thought that education should primarily focus on the environment, and Louis Agassiz, who advised students to study nature instead of relying on books (McCrea, 2006). Others argue that environmental education may have its roots in the nature study movement of the early 1900s or perhaps in the conservation education programs of the 1930s.

The historical development of environmental education can be categorized into an early phase and a modern phase. The early phase of environmental education was influenced by the philosophies and writings of Rousseau (1712–1778), Agassiz (1807–1873) and notable educators such as Liberty Hyde Bailey (1858-1954), a strong proponent of nature study, who at the onset rejected the term environmental education because he thought that it was imprecise, theoretical, ambitious, and always in need of elucidation (McCrea, 2006). The early phase of environmental education includes both the nature study era and the conservation education era, which emerged as a result of the “Dust Bowl” of the 1930s in the United States’ Midwest. McCrea (2006) further observes that perhaps John Dewey’s (1859-1952) progressive education movement in the

1930s – which promotes a more learner-centred, holistic approach to education, such as learning by doing, lifelong learning, and integrated/interdisciplinary efforts – and remains important aspects of today’s environmental education approaches while having influenced the conservation education era.

On the other hand, recent modern environmental education has been traced to increased public awareness of widespread environmental degradation and pollution, culminating in the first Earth Day in 1970 (McCrea, 2006). Moreover, the explosive growth of the human population and the impact of modern technology, coupled with the profligate use of resources, could not be ignored any longer, thus modern environmental education emerged as part of the response to tackle these problems (Smyth, 2006).

As part of response to address the world’s environmental problems, UNESCO called a conference in Tbilisi, Georgia in 1978 (UNESCO, 1978). Recommendations (UNESCO, 1978) resulting from this conference were not fully implemented because neoliberal forces interpreted the outcome as too green. Placing more emphasis on environmental degradation instead of human development, this reaction, “castrated all possibility of environmental education being able to contribute to the radical questioning of the state of existing things” (Gonzalez-Guadiano, 2006, p. 296). Tbilisi may not have brought about significant achievements in terms of policy implementation, but in Fensham’s (1978, p. 492) estimation, it was “a minimum indication of what the UNESCO and UNEP program had promoted and conquered in the international frame” (cited in Gomez, 2005, p. 264). If Tbilisi initiatives in environmental education were fully adopted, much of the environmental education curriculum today would have fostered attitudes that nurture human-nature relationships rather than the current emphasis on

scientific ecology, which pays less attention to people's attitudes towards the environment.

The Tbilisi Declaration (UNESCO, 1978) defines environmental education as a:

Learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible actions.

In contrast, Bourn (2008) claims that the roots of environmental education go back to the Brundtland Report (WCED, 1987), presented nine years after Tbilisi and the recommendations made at the 1992 UNCED Rio Summit on Sustainable Development (Scott and Gough, 2004). In addition, the World Summit on Sustainable Development (WSSD) held in Johannesburg between August 26 and September 4, 2002, reaffirmed sustainable development, making a renewed call for using education to raise awareness for sustainable development by:

Ensuring that, by 2015, all children will be able to complete a full course of primary schooling and that all girls and boys will have equal access to all levels of education relevant to national needs.

Eliminating gender disparity in primary and secondary education by 2005.

Recommending to the UN General Assembly that it consider adopting a decade of education for sustainable development, starting in 2005 (extracted from Nath, 2003, p.233).

Some of these recommendations have been implemented, such as The Decade of Education for Sustainable Development (DESD) initiative, which has now been running for almost four years. The goal of DESD as described on the UNESCO (2005) website is "to integrate the principles, values, and practices of sustainable development into all aspects of education and learning." It further states that, "this educational effort will

encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations” (UNESCO, 2005). It was in the Rio 1987 Declaration that environmental education became intersected with Indigenous knowledge and education for sustainable development. Prior to that, environmental education and sustainable development discourses largely excluded the rights and knowledge perspectives of the world’s Indigenous peoples.

This is a particular historical overview, given that outdoor education and science education also have links with environmental education. This brief historical development of environmental education, however, helps us understand the historical trajectory of contemporary environmental education, the important environmental conferences that shaped current environmental education and how environmental education deviated from its original intents which were to prevent the escalation of our environmental problems resulting from industrialization and its attendant lifestyles. This overview further explains how environmental education gradually became aligned with neoliberal environmental governance, which however subverted harmonious sustainable relationships with the natural world, promoted in Indigenous environmental education.

Framing environmental education curriculum

The central argument undergirding this subsection is anchored on the premise that a sound environmental education program must be informed by local initiatives. I concur with Robottom (2004) that environmental initiatives have to originate from identified environmental problems and other issues that may have direct or indirect impacts on the

local environment. For instance, in Southeast Nigeria, soil erosion, deforestation and bush burning are serious environmental issues. Igbos are also worried that knowledge about the local resources and the Igbo language are declining among the children and youth. Therefore, a purposeful environmental education in Igbo land must seek to address or correct the aforementioned environmental problems. After all, environmental education entails becoming knowledgeable with respect to society's local environmental problems.

If every local community in the world acts in an environmentally responsible way by making sure that their immediate local environments are taken care of, I believe that global environmental problems could be reduced. However, some people “externalize” waste, such as in North American cities that proclaim to be environmentally conscious, but are nevertheless dumping their waste elsewhere, notably in developing countries (e.g., Nigeria) where dilapidated equipment and hazardous materials with health and environmental consequences are frequently shipped.

By investigating local environmental problems, students apply their local knowledge to solve their immediate environmental problems. The students' actions can be visibly seen in the improvement and/or protection of their environment; nothing is more empowering than this. This participatory process will sooner or later involve local communities, yielding even better results because everyone is involved. Nevertheless, students must also learn about the structural factors and socio-historical choices that have created large-scale environmental problems. Such education serves to prevent society from repeating the same errors.

For instance, local initiatives may be drawn from aspects of Igbo traditional knowledge such as traditional medicine, farming practices, local animals, local plants and

their medicinal values and local environmental management practices such as ways of controlling erosion, etc. All of these, perceived by the people as crucial to their continued existence in their local ecologies, could be crafted into the school environmental education curriculum. There are sound pedagogical considerations that justify incorporating Indigenous knowledge into the various aspects of school curriculum, as it is argued that community beliefs and students' cultural identities contribute to learning, and further deepen Indigenous students' interest in knowledge about the natural world and local ecologies (Lemke, 2001). Similarly, Mboya (1999) makes a fervent call for education to be directed towards the strengthening of Indigenous cultures while not merely assimilating Western values. Furthermore, Keane (2008) advised that when considering appropriate Indigenous knowledge goals that the community might wish to achieve via the curriculum, it is important that the local community considers its intents and purposes for the development of Indigenous knowledge, the community's needs, the availability of experienced teachers (both trained teachers and experienced elders), and aspects of Indigenous knowledge that are vital to the continued existence of the culture. The latter is important because the community needs to distinguish Indigenous knowledge from mere myth, superstitions and aspects of African traditions that institutionalize discriminatory practices against women and fellow human beings, as in the case of barring females from inheritance and the *osu* cast system practiced in Igbo traditional culture. The processes and criteria for valuing which aspect of Indigenous knowledge to be incorporated in the school curriculum will depend on whether or not such practices are useful and progressive. For example, bush burning is considered harmful to the soil even though some argue that it has some benefits. I must point out that

Judging and valuing in terms of Indigenous practices is a difficult process, but I believe Indigenous processes and decisions aligned to social justice and promotes Indigenous well-being can help make these decisions much easier,

A practical way of promoting and deepening understanding of the local environment could entail having students' research vital elements of Igbo traditional medicine. Such experiences will help students produce useful data on Indigenous herbs and their uses. In like manner, Keane (2008) suggests that specific knowledge about traditional medicine known to traditional healers (called *Sangomas* in Zulu or *Dibia* in the Igbo language) should be included in the environmental education curriculum. By so doing, holders of traditional knowledge within the community, knowledgeable in herbs used for traditional medicine, might be more willing to pass on their knowledge in so far as it stays with the people rather than being appropriated by outsiders. I argue that keeping this knowledge secret is not in the best interest of the community and does not ensure the survival and preservation of Indigenous knowledge. As appealing as it might sound, this presents a problem in the sense that Indigenous knowledge at that level is guarded with secrecy and this is an obvious challenge on this basis.

Food cultivation and processing is another vital aspect of Indigenous knowledge that has to be included in the environmental education curriculum. Farming skills and the nutritional values of local staple foods constitute relevant knowledge that the science and social studies curriculum should include. Students need to learn about the nutritional values of their local staple foods, which encourages regionalism and healthy eating and teach them to rely on locally grown food and depend less on shops and supermarkets for their food.

The benefit of including community histories, traditional medicine, food cultivation, processing techniques, and nutritional information of local staple foods cannot be overemphasized in developing a curriculum that has an Indigenous knowledge perspective. Above all, including all these in the environmental education curriculum are important for income generation, improved health and the survival of the people and their knowledge.

Having explored how drawing from local ideas can be fundamental to culturally-based Indigenous environmental education, I now present some of the challenges that could emerge in the community when merging different approaches or ideas of environmental education because not everyone in the community subscribe to the same environmental view.

Conflicting ideas arising from different paradigms

Conflicts can arise in Igbo society and other communities when ideas compete against one another. For instance, in a typical Igbo society, there are some people who are strong Igbo traditionalists and others who are pro-Western advocates. Strong traditionalists believe in Igbo Indigenous ways and hold that Western ways subvert Igbo collectivist traditions and knowledge of their natural environment. Pro-Western Igbos are more inclined to Western ways of doing things, either because of a lack of rootedness in Igbo culture or because of personal preference. Consequently, the preference for one particular approach over and above the other can result in conflicts when trying to establish a common Indigenous environmental education goal for the community. Instances where differences in ideas may result in conflict abound. For example, some support bush

burning (an important land preparation practice before cultivation) while others do not. Thus, any local environmental education idea-forbidding bush burning in Southeast Nigeria may encounter resistance from some members of the community because the practice of bush burning is the traditional method of land preparation before planting. Some Western ecologists critique this practice, failing to understand that it is a sustainable practice when employed properly and has been in use for centuries (Hecht and Cockburn, 2010; Leach and Fairhead, 2000). Other contentious issues include the use of fertilizers to increase crop yield. Some local farmers are opposed to the use of chemical or inorganic fertilizers while others support such practices. These are contentions, which present challenges to a culturally-based Indigenous education program.

In anticipation of these conflicts, Robottom (2004) articulates how conflicting environmental views can be harmonized. He recommends that pedagogical approaches in environmental education consider a collaborative effort to restore local landscapes and wellbeing of the community. The wellbeing of the Igbo society should, however, include programs that can improve sanitation and regenerate local Indigenous plant species. Ultimately, what justifies ideas to be included in the local environmental education curriculum is the usefulness of that particular idea in relation to the sustainability of the people and the local environment. Thus, as argued by Shuklian's (1995), the usefulness of knowledge or ideas is judged by how well they enhance the 'quality' of human existence with fewer consequences to the environment.

In the context of Igbo society, I advocate a wide range of consultation and negotiation between traditionalists, schools, government, and pro-modern individuals in

society. These are difficult processes, as Robottom (2004) points out, but they go a long way toward harmonizing the social, cultural, historical elements that present in a socially constructed concept like ‘environment.’

Indigenous environmental education and human-nature relationships

In light of the above, I believe that for Indigenous environmental education in Igbo land to promote the knowledge of the natural local environment, Indigenous environmental education curricula should provide students with knowledge and opportunities to experience their local environment, in order to foster sustainable relations with nature.

There are traditional practices in Igbo land that help maintain sustainable relations with nature. For instance, on certain market days, people are prohibited from hunting and harvesting resources from their farms or the forests. Unfortunately, these cultural practices have been largely dismantled by modernization and people adopting Western individualist culture. As a result, the Igbo now construct nature as an object to manipulate, exploit and control (Plumwood, 2002), like the West. Regrettably, education is currently rooted on this rationality. In addition, Bowers (2001) highlights how the exaltation of scientific language in environmental education, which mainly emphasizes anthropocentrism, linear progress and individualism, has impeded a critical interrogation of the negative consequences of science and education generally. Although expressed ironically, Schwartz and Schwartz (1995) note that in response to the ecological crisis, Western educators have created an environmental education curriculum whose very roots are firmly entrenched in the culture of Western modernism. Against this backdrop, Bowers (2001, p. 32) argues that environmental education is caught in “a conceptual

double bind,” or maybe a paradox, in which the ability to solve the problem (the environmental crisis) is “dependent upon the same patterns of thought which have contributed to the problem.” By the same token, Lefay (2006, p. 36) asks, “[i]f reason and rationality, the foundation of Western culture, have brought us into these dire straits, how can we hope that the same thinking will get us out?”

Orr (1994, p. 2) writes that “much of the current debate about educational standards and reforms, however, is driven by the belief that we must prepare the young only to compete effectively in the global economy. That done all will be well, or so it is assumed. But there are better reasons to reform education, which have to do with the rapid decline in the habitability of the earth.” I believe Orr (1994) is right. When most politicians talk of educational reform, what is at the back of their minds is global competitiveness. Even politicians regarded as a mildly pro-environmental conceive educational reform as mainly improving the achievement scores in standardized tests so that young people can effectively compete in the global economy. This is not bad, but the problem is the relatively less emphasis on skills and attitudes that nurture human-nature relations. What else can be expected from the neoliberal agenda? It does not matter how much it is disguised, the ideology of growth and competitiveness remains the fundamental interest.

This type of educational reform promoted by liberal politicians, whose only interest is in global competitiveness and economic growth, is not in line with education from an ecological perspective. Orr (1994, p. 8) further laments that if precautions are not taken, education may equip people “merely to be more effective vandals of earth” also arguing that our current education “emphasizes theories, not values; abstraction rather

than consciousness; neat answers as opposed to questions; and technical efficiency over conscience.” Much of this situation is exacerbated by disciplinary-focused education, which advances industrialization and technocratic managerialism (Orr, 1994; Bowers, 1997; Sterling, 1996, 2002) and this notion of education will never remedy the damage caused by industrialization.

As a result, I argue that for education and environmental education in particular in Igbo land to advance ecological sustainability through knowledge of the natural physical environment. To promote collective notions of wellness as opposed to individualism, environmental education must be re/connected to Igbo traditional modes of thought and reject those aspects of Western ideas that subvert Indigenous knowledge and the overall well-being of the people. This redirection of education however, requires a lot of will power, collective power, and re-education of Indigenous Igbo people.

A critique of current modern liberal education

The previous subsection argues in the context of promoting/nurturing human-nature relationships through Indigenous environmental education. I argue that the rationality of the current modern liberal education presents an enormous challenge to the realization of this goal. With this in mind, I emphasize Littledyke’s (1996, p. 202-203) critique of modern science and education to demonstrate how liberal education has disconnected humans from nature and the negative impact it has on environment.

Modern science as a discipline has had a key role in this process of disconnection from the consequences of action. Thus Eagan and Orr (1992) show how modern science within a fragmented school curriculum reflects values which are alienated from nature. This also makes interdisciplinary studies, which are essential to understanding the scientific, social and political dimensions of environmental issues, very

difficult. Such objectification processes are central in modern relations with the environment. When living things are seen as object of use or of no consequences then permission is available to destroy them. When this attitude is also linked with anthropocentrism, where human concerns are seen to be of greatest significance, then this creates potent conditions for environmental exploitation.

Similarly, Sterling (2002, p. 3) in criticizing the current education argues that the “dominant Western epistemology, or knowledge system, is no longer adequate to cope with the world that it itself has partly created.” Equally reasoning along these lines, Bateson (1972) describes Western epistemological systems as an “epistemological error.” Sterling (2002, p. 3), however, prefers a more subtle term “inadequate” to describe current liberal education because in his view what is needed is not a total rejection of the Western worldview, which undeniable brought some advancement to humanity, but rather an expanded, more adequate epistemology that could “subsume and transform” the dominant paradigm. This expanded view of education is where inclusion of Indigenous perspective comes to mind.

Correspondingly, Smith (2002, p. 7) characterizes formal education in our time as:

Instrumentalism, techno-rationalism, short-term, managerialism, a refusal to think about what, after all, education is for, a neglect of, or indifference towards, the embodied experience of the pupil or learner; not just a failure to nurture in him or her a love of the things of this world, but an encouragement to disdain them: how, under these circumstances, could we ever foster the frame of mind sympathetic to sustainable development?

Smith’s (2002) question is very thought-provoking and suggests that this type of education cannot guarantee the frame of mind that could lead to sustainability. The insatiable desire to accumulate wealth, with its attendant ecological consequences,

growing poverty and widening gap between the rich and poor, and the total separation of humanity from the non-human other, is a demonstration of the fact that we must rethink education.

Chapter Five

Research Design and Methodology

This inquiry explores the decline of Igbo Indigenous knowledge, culture and language in south eastern Nigeria and also factoring locatedness of Igbos in relation to acquisition of Igbo traditional knowledge, language and culture and trans-generational/intergenerational transfer. It is essentially an Indigenous research project that applies Indigenous/decolonization methodology.

Indigenous/decolonization methodology

Indigenous/decolonizing methodology is a research framework that approaches research and knowledge production from the perspective of Indigenous epistemologies and ontologies (Root, 2010). Indigenous methodology in essence involves critical decolonizing processes, to interrogate and counter Eurocentric hegemonic narratives resulting from colonialism, and as well as decolonizing the mentality of people colonized, in this particular instance Igbos. Thus, Indigenous research and decolonization project go hand in hand because you cannot conduct Indigenous research without recognizing the various ways in which Western Eurocentric knowledge has (mis)represented Africans and other Indigenous peoples that experience colonization. With this in mind, Indigenous researchers use their research to critically question and deconstruct Eurocentric views about Africa and her people. The act of this critical analysis is a deconstruction process. Thus, Indigenous methodology must acknowledge colonial distortion and representation of Indigenous cultures and histories, as well as the oppression of Indigenous peoples.

Accordingly, Indigenous research is seen as a political tool to rearticulate the views of Indigenous peoples about their histories and cultures (Tuhiwai Smith, 1999; Kovach, 2012).

Is Indigenous Methodology an aspect of qualitative research? There are similarities between all aspects of research because all involve approaches to gathering and transmitting of knowledge (Creswell and Miller, 2000). However, qualitative research may be associated with Indigenous methodology in the sense that it involves a nonmathematical process of interpretation for purposes of identifying patterns within the data from which themes emerge (Strauss and Corbin, 1998). In addition, Denzin and Lincoln (2003) assert that qualitative research stresses the socially constructed nature of reality. This socially constructed reality is based upon interpretations of reality arising from the experiences of those involved in the research within a particular social context. Indigenous epistemology, unlike Western rationalist and reductionist epistemology, recognizes a holistic interconnection of all creations (Lowan, 2012). However, qualitative research has increasingly veered away from positivist methodology (Berry, 2006) to a more interpretative approach, and for this reason, Indigenous methodology can be considered qualitative research. Similarly, Kovach (2012) asserts that Indigenous methodology is located alongside the conceptual framework of qualitative inquiry because it comprises characteristics congruent with other qualitative approaches such as feminist methodologies and participatory action research. However, “Indigenous epistemologies are the centre of Indigenous methodologies, and it is this epistemological framework that makes them distinct from Western qualitative approaches” (Kovach, 2012, p. 25).

Having said that, I regard my research approach as Indigenous methodology but the question is: is there any research within the Indigenous research field that is truly an Indigenous methodology? Frequently Indigenous researchers employ Indigenous methodology in combination with a qualitative approach. Donald (2009) invokes the metaphor of a weaver to illustrate how Indigenous researchers critically combine both Western and Indigenous traditions. In part this arises from the significance of oral tradition and storytelling as foundational characteristics of Indigenous cultures and epistemologies (Bastien, 2003). Thus Indigenous cultures have preserved their history, family lineages, and cultural stories through oral traditions. However, employing storytelling and narratives, which are valid Indigenous methods of knowledge production, without applying Western qualitative methods such as theme identification and data analysis, even those who explicitly identify as Indigenous academics may not consider the work valid research. I wish to stress that the work we carry out as Indigenous research is not typically an Indigenous research approach arising from oral narrative but a combination of Western and Indigenous approaches.

Nevertheless, Indigenous research can emerge from recognized Indigenous ways of knowing such as oral tradition and storytelling, and still satisfy the rigor of research (Tuhiwai Smith, 1999). To echo Tuhiwai Smith (1999) what really matters is how culturally relevant and empowering the research is to Indigenous people rather than its conformity to Western epistemic traditions. Thus, Indigenous research should connect to the philosophy and principles of Indigenous knowledge, cultures and languages and should be concerned with struggles and cultural wellbeing (sustainability) of Indigenous peoples (see Tuhiwai Smith, 1999, p. 185). As such Indigenous knowledge is closely

aligned with critical pedagogy in that it exposes underlying assumptions which serve to conceal the power relations that exist within society and the ways in which dominant groups justify and maintain inequalities and oppression of Indigenous people. On this basis, Indigenous methodology should aim to ensure that Indigenous research adequately represents Indigenous interests by giving voice to Indigenous viewpoints and perspectives through her cultural narratives, and these stories must not be expected to conform to the standards of Western science epistemology.

I further elaborate on the above view by drawing on Tuhiwai Smith's (1999, p. 187) argument that grounding research on Indigenous (and in this specific case Maori) views "does not preclude us from being systematic, being ethical, being 'scientific' in the way we approach a research problem." Indigenous methodology can produce knowledge through oral tradition and storytelling and still be systematic and pragmatic. If the stories we tell help us reshape our thinking, to understand ways in which dominant worldviews have undermined Indigenous ways of life and being, and eventually help Indigenous people solve their problems, does it matter that the knowledge systems that produced this desired outcome do not conform with the established Western scientific tradition?

Indigenous methodology should be consistent with Indigenous ways of living and organizing of social life. It should report back its findings to the community, so that communities can benefit from the findings. Most importantly, Indigenous research has to find ways of giving voice to Indigenous issues and problems affecting them. These issues and problems vary with different groups of Indigenous peoples. For example, for the First Nations people of Canada, central concerns are land and resource claims and social injustices, for the Niger Delta people of Nigeria, their issues are around resource

extraction, pollution and self-determination, and for the Igbos of south-eastern Nigeria, where this research is based, the central issue is self-determination. Various groups of Igbos have pursued political agitation for self-determination. This, however, is outside the scope of this study -- I just made mention of it here to elucidate this argument. Thus, Indigenous research centers on issues which Indigenous people hold very important, and this is how Indigenous researchers give voice to their community problems.

It is important to point out that there is a fundamental epistemological difference between Western and Indigenous epistemologies, and this difference in philosophical, ontological, ideological and methodological approaches poses challenge to Indigenous researchers. That explains why even when Indigenous researchers wish to employ their cultural epistemology, i.e., an Indigenous methodology, they end up intentionally or unintentionally falling back on Western qualitative research. In fact, graduate Indigenous students who hold an alternative worldview regarding research and production of knowledge face this problem a great deal. In view of this dilemma, Kovach (2012) argues that while it is not a matter of which worldview is the best, it is important to recognize and privilege both approaches, bridging the epistemic dissonance despite the challenges in doing so. I equally recognize this challenge because as an Indigenous researcher I am confronted with the dilemma and uncertainty regarding in which methodology should I situate my study, and the insecurities regarding the use of, and reliance on personal narratives, storytelling, and oral traditions as sources of data. For this reason, Indigenous researchers must engage in self-interrogation, their procedures, their process and methods, and their findings, highlighting the importance of reflexivity to Indigenous research and methodologies.

Reflexivity in Indigenous Research

Reflexivity is a vital element of interpretative research (Tobin and Kincheloe, 2006), especially in Indigenous research. Since Indigenous research methodology involves unconventional methods such as story-telling and personal narratives, there is need for Indigenous researchers to examine their role in the research process (Lowan, 2012). Kovach (2010) stresses the critical importance of reflexivity in Indigenous research and environmental education. It is important that reflexive researchers reflect on their experiences throughout the research journey, more especially, how their cultural and social positioning and their interpersonal relations with their participants influence their research. Given the social and cultural situatedness of many Indigenous researchers, embedded in the socio-cultural context in which they are carrying out their research, it is crucial that they constantly engage in self-interrogation concerning their research journey in order not to be accused of bias under the Western epistemic paradigm.

Kovach (2012, p. 32) argues that since qualitative “research is founded upon an interpretive tradition” and granted that it is knowledge which emerged from the analytical judgment or conclusion of the researcher (i.e., “through the eyes of the researcher”), there is an assumption that subjectivity is present or inherent in interpretative research. For this reason, reflexivity, which is the “researcher’s own self-reflection in the meaning making process” is often utilized to enrich the research.

Self-reflexivity can sometimes be described as critical reflexivity when the research has a political undertone and questions privilege (Herising, 2005). In the light of this, as I have argued previously, Indigenous research and decolonizing methodologies

demand a critical reflexive approach which considers the West's representations of Indigenous peoples, cultures, society and epistemology. Decolonizing methodology, as a critical approach is effective in examining power relations between groups, and this provides possibility for structural change and resistance that could perhaps lead to social transformation (Graham-Smith, 1997; Kovach, 2012).

In concluding this discussion, I draw on Kovach's (2012, p. 81) argument that Indigenous methodology must essentially incorporate a 'decolonizing agenda' for the reason that there is "persisting colonial influence on Indigenous representation and voice in research." Consequently, the burden is on Indigenous researchers to use a decolonizing lens to identify where Indigenous voice is silenced and misrepresented in research. In addition, Indigenous methodologies are obliged to strive for social justice by exposing social oppression and injustice. Indigenous research methodology requires that Indigenous ways of knowing such as oral tradition, storytelling and other traditional protocols are respected and honoured. Indigenous research should aim to give back to the community and should not exploit the participants or the community.

I now offer detailed specifics of the methods used in the exploration of the decline of Indigenous knowledge and language in the context of Igbo south-eastern Nigeria.

Methodological Approaches and Methods

The data for this Indigenous research encompasses personal narrative, narratives of participants and interviews, documents and literature. Before detailing my methods, I briefly revisit the main research questions here: **Why is Igbo Indigenous knowledge is declining and what are the possibilities of using a culturally-based Indigenous environmental education to revitalize Igbo Indigenous knowledge, culture and language?** I explore this overarching question through the following sub-questions: How has the prevalence of Western knowledge affected the Igbo Indigenous epistemic system and ecological sustainability of southeastern Nigeria? What are the factors responsible for the devaluation of Igbo Indigenous knowledge, and in what ways has the minimal use/disuse of Igbo language in both the Igbo homeland and the diaspora (in the context of Igbos in Canada) affected the intergenerational transmission of Igbo Indigenous knowledge? Finally, if there is a devaluation of Igbo traditional/Indigenous knowledge, what role can Indigenous environmental education play in preserving Igbo traditional knowledge, language and cultural heritage?

In an attempt to answer these questions, I conducted the fieldwork for this research in two places: Southeast Nigeria and Toronto, Canada. The reason I have conducted this research both in Igbo land and in the diaspora is because the problem of study, i.e., the decline of Igbo Indigenous knowledge and language, is important to both groups. A deeper understanding of this problem will help both groups reconnect with their culture and knowledge system. I must state upfront that this Indigenous methodology does not claim to seek conclusive, definitive, objective answers to phenomena I am exploring. Rather, my concern is to find a rich understanding of human

experiences in this particular context. Accordingly the strategies of inquiry that provide data for this project include interviews, observation, field notes and rich narrative and document analysis (Cresswell, 2009).

Fieldwork in Southeast Nigeria

As a diasporic Igbo living in Canada, I had no problem developing rapport with the local participants, although a friend served as my ‘gatekeeper.’ A gatekeeper is an individual who is a member of or has insider status with a cultural group (Creswell, 1998, p. 117). My gatekeeper, my initial contact in Nigeria, led me to other informants (Hammersley and Atkinson, 1995). Having had a series of telephone conversations with him about the topic of research prior to my visit, he was able to identify suitable participants for the study, and I trusted his judgement based on the fact that he was my classmate as well as his related work experience as a school principal. The rationale for selecting the adults I interviewed was their extensive knowledge concerning Igbo Indigenous knowledge issues, following Creswell’s (1998, p. 111) notion that “the researcher needs to determine the type of purposeful sampling from the array of possibilities and present a rationale for the selected approach.” The nearly five weeks I spent in the field in Nigeria was very hectic as I was either carrying out an interview or scheduling one. Some of the interviews were conducted in remote areas with unpaved roads so my guide and I were able to access the villages with motorbike. Right from the day I landed in Southeast Nigeria to the day I left for Canada, I was working around the clock to finish my interviews in view of the limited time and resources at my disposal.

Employing an intensive interview technique (Lofland, 1995), I interviewed five adults (one of which was an elder) in the Igbo homeland who are knowledgeable about Igbo traditional knowledge and culture. I also interviewed four students. Due to the vast size of Southeast Nigeria, I conducted interviews in only two local government areas: Owerri North LGA and Owerri South LGA, as well as in some areas in Uguta. The interview and field note data from the focused localities provided insight into whether or not Igbo Indigenous knowledge is declining in Igbo land. I designed separate interview questions for the teachers and the students. For the most part, intensive interviewing techniques were utilized in this study. Lofland (1971, p. 76) describes intensive interviewing as “a guided conversation whose goal is to elicit from the interviewee (usually referred to as the informant) rich, detailed materials that can be used in qualitative analysis.” According to Lofland (1995), the intensive interviewing technique is useful in discovering the perceptions and experiences the participants (informants) have with respect to a particular situation or topic. Potter (1996, 1997) refers to this intensive interviewing as ethnographic interviewing. My reason for utilizing this technique is that it encourages conversations that produce rich narrative descriptions of experiences. This interviewing technique was appropriate for my study because I want to dig deep into the minds of my participants to understand their perspectives and stories about traditional knowledge and Indigenous environmental education in the context of communities in Southeast Nigeria.

I also collected textual information and documents on Igbo Indigenous knowledge and environmental education from the early colonial period to the present time. These were sourced from the Imo state Ministries of Education and Arts and Culture and Igbo

Net, a website that documents the history, political history and culture of the Igbo in Nigeria. I also consulted the Archives of Ahiajoku Lecture series written by the Igbo Intelligentsia on Igbo Indigenous Knowledge, civilization and achievements titled “The Ahiajoku Lecture Series: An Enduring Legacy” compiled by Nkem Ekeopara (2015). Additionally, I analyzed government policies on Indigenous knowledge and environmental education. The interviews, archival documents and policy analysis all inform the findings of this study discussed in Chapter 6 of this dissertation as well as my observations in the earlier chapter of this dissertation.

The interviews with each participant lasted approximately two and half to three hours. Sometimes I had to hurry through some aspects of the interviews. To facilitate transcribing, I conducted the interviews in English and used the Igbo language for clarification where participants seemed to have problem understanding some concepts in English. In the course of the extended interviews, I occasionally switched from English to Igbo language to ensure a nuanced understanding of the context of the questions. The interviews were recorded and subsequently transferred to my computer files and securely stored.

In recognition of my dual positionality in this research as an insider because I share the same language and cultural identity with the participants and as an outsider because I am an academic who has lived in the West for a long time, I cannot completely stand outside of my work. Adefarakan (2011), a Yoruba feminist Indigenous scholar, grapples with the complication of the ‘Indigenous insider’ and Western researcher duality in her doctoral thesis, titled *Yoruba Indigenous Knowledges in the African Diaspora: Knowledge, Power, and Politics of Indigenous Spirituality*, asserting that she cannot

stand outside of her work. Adefarakan (2011) uses the work of Dorothy Smith, a feminist sociologist, to challenge the notions of objectivity in research:

The practice of objectivity in the social sciences allows that science to detach its corpus of statements from the subjectivities of those who have made them. It has very little to do with the pursuit of knowledge (Smith, quoted in Adefarakan, 2011, p. 11)

As pointed out earlier, objectivity is not the goal of this Indigenous research, as objectivity is antithetical to what it is about. However, Indigenous academics and researchers are pressured for their research to conform to the canons of the institutions and establishments that train them. This is in line with Gough and Gough's (2004) criticisms of African writers who write to please Western audiences instead of using their writing to best tell their stories in their own specific ways. To extend Smith's (1987) and Adefarakan's (2011) discussions of the impossibility of objectivity in research, I argue that every researcher comes into a particular investigation with biases, ideological leanings, cultural backgrounds, particular perspectives, social locations and political positions: It is from these viewpoints that we read, know, and understand our world, lives and experiences (Lorde, 1984; Collins, 1990; Adefarakan, 2011).

The politics of the production of knowledge and the insider/outsider dilemma in Indigenous knowledge research is captured by Linda Tuhiwai Smith (1999) in *Decolonizing methodologies: Research and indigenous peoples*. Tuhiwai Smith (1999, p. 5) writes:

There are a number of ethical, cultural, political and personal issues that can present special difficulties for Indigenous researchers who, in their own communities, work partially as insiders, and are often employed for this purpose, and partially as outsiders, because of their Western education or because they may work across clan, tribe, linguistic, age and gender

boundaries. Simultaneously they work within their research projects or institutions as insiders within a particular paradigm or research model, and as outsiders because they are often marginalized and perceived to be representatives of either a minority or rival interest group.... Indigenous researchers are expected, by their communities and by the institutions which employ them, to have some form of historical and critical analysis of the role of research in the indigenous world.

This dilemma underscores the politics of knowledge production, especially in Indigeneity. Because Indigenous knowledge is situated on the margins of academia and produced by the periphery or the subaltern, mainstream establishments devalue and disregard this knowledge. It is therefore crucial that Indigenous knowledge researchers employ some form of critical analysis in order to clarify the purpose of their research and determine its benefit for their communities, as opposed to adhering to rigorous institutional canons that do not add value to their work. I think the most important thing of all for indigenous researchers is to use their research to promote the sustainability and well-being of their communities. This should be their goal.

Fieldwork in Toronto

As Adefarakan (2011) points out, diasporic Africans (not only the Yorubas she investigated in her study but also the Igbos and indeed all continental Africans in the diaspora) have one foot on each side of the Atlantic, which means that they are fully interested and engaged in the politics and well-being of their native countries. In fact, when Nigerians are gathered, and most certainly Igbos, conversations revolve around the happenings in their native homeland.

My conversations with the Igbo in the diaspora (in Toronto) indicate that the Igbos here are deeply interested in the matters that affect their community, paramount among which is the decline in Igbo Indigenous knowledge and the Igbo language. I have thus included the Igbo diasporic community in Toronto in my work in order to understand their perspective of this problem.

To explore the perspectives of the Igbo diaspora on the decline of Igbo Indigenous knowledge and language and how the issue of locatedness shapes Igbo Indigenous/traditional knowledge and the generational transmission of Indigenous knowledge and culture, I conducted fieldwork at the Igbo Language School in Toronto. This school is a joint venture between the Toronto Catholic District School Board and the Igbo Community Cultural Association in Toronto.

As Igbo immigrants started to have families in Toronto, the realization that their children might lose their language and cultural heritage became a great concern, and thus, the Igbo Language School was created in 1993 to address this concern. It aimed to serve as a panacea for the cultural and language dilemma of Igbo diasporic children. Through the learning experiences offered there, the children are exposed to the Igbo language, Igbo traditional knowledge such as *Iwa oji* (the kolanut ceremony), Igbo marriage rites and rituals, the naming ceremony, respect and morality, folklore, dance, music and much more.

The goal of the school is to teach first-generation Igbo Canadians their language and cultural heritage. The class meets every Saturday. Depending on turnout, the number of students range from fifteen to twenty, this number however, is not an adequate representation of Igbos in the GTA, considering the fact that the Igbo Union of Canada

(2011) estimates that more than five thousand Igbos live in the Greater Toronto Area. I take my children to this school on most Saturdays, and my children have been attending this school for more than two years. For the purposes of this research, I observed the students for about six months and interviewed the teacher. The reason I chose the school is because it symbolizes the yearning and aspirations of the Igbo in the diaspora to reconnect their children to their Igbo roots.

I also interviewed an Igbo elder in Toronto to include additional perspectives on the topic. It took more than six months to complete my interviews in Toronto. Not surprisingly, it was easier for me to schedule interviews in Igbo land than it was in Toronto, as it was difficult to track people down with very busy schedules in the western world.

After concluding my fieldwork, and in order to get a general sense of the data, I followed Agar's (1980) advice to read the transcripts in their entirety several times and become immersed in the details. This allows one to get a sense of the interview as a whole before breaking it into parts. Once I acquired a general sense of the data (from both the homeland and Toronto), I identified 15 themes based on the research and interview questions. Finally, I organized the categories and themes by comparison (Corbin and Strauss, 1990) and reduced the themes to the eight categories listed below. In Chapter 6, I build a narrative around these themes and connect the categories in an attempt to craft a coherent analytical story, while at the same time relating it to the larger literature and theoretical framework undergirding this research.

Key Participants

Before I conclude this chapter, I provide a brief description of the major participants in the study, in order to give the reader insights and as well as background information on the participants. I have included the statements of these participants in the analysis and discussion later in Chapter 6, but I will not repeat the information provided here about who they are. To protect the identity of the participants, the names of the participants are pseudonyms.

Mr. Mazi Nkwo is a middle-aged high school teacher, in his mid-fifties located in the Uguta local government area of Imo state, Nigeria. He teaches agriculture in a rural secondary school close to his own village. Mazi Nkwo is an ardent believer in Igbo Indigenous knowledge; in fact, he is an Igbo traditionalist.

Mr. Oha is a high school principal who teaches biological sciences in the same school as Mazi Nkwo. He is 46 years old. Oha is an old friend of mine, and I consider him to have been my gatekeeper in this research, by which I mean that I obtained access to some of the participants through his connections. He is from the Owerri local government area of Imo state, Nigeria, but he commutes daily to Uguta, where the secondary school he teaches at is located.

Elder Amamon is 69 year old and a retired civil servant who is now engaged in another kind of vocation - farming. He holds an advanced certificate in agriculture and education. Elder Amawon is from Owerri town in the Owerri Municipality. Based on my conversation with him, I infer that he is current with educational issues of the state. While in the civil service, he worked in the Ministry of Education and was then seconded to the Ministry of Agriculture. For this elder, the “cultural ties that bind Igbo Indigenous society

are broken.” He laments the “death” of Igbo Indigenous knowledge occasioned by Western influences, which have swept the youths away like a tsunami. He disparages the youth who seem uninterested in the Igbo Indigenous and traditional ways of life, evidenced in their lack of respect for elders and the traditional ways upon which traditional Igbo society is based.

Lady Ogbaku is a secondary school teacher in a community school, as well as a traditional medicine woman who claims to heal all kinds of diseases and infections. She is in her late forties. She has a strong belief in traditional African medicine and thinks that Igbo traditional medicine should be revamped to complement Western orthodox medicine.

Ada is the owner of a private school. She is from Uratta in the Owerri North local government area, but her school is located in the Owerri Municipality. When asked why most private schools seem to shun Igbo as a language of instruction, preferring either English or French, she responded that in her school, the two languages of instruction are Igbo and English. She stated that they use both languages equally, such that if students do not understand English when a concept is taught, they can understand the concept in Igbo.

Chichi is the Igbo language teacher at the Igbo language school in Toronto. Chichi was an Igbo teacher in Nigeria, and when she migrated here ten years ago, she was recommended by the community organization due to her interest and belief in Igbo language education for our children. The school is open during the school year, every Saturday from 9am to 1pm. Instruction is provided on Igbo language, culture, traditions and heritage. At its peak (between 1999 and 2006), there were about 50 or 60 students at

the school, but with political and ideological disagreement and conflicts within the Igbo organization, attendance has fallen significantly. Chichi laments the poor or infrequent attendance and that parents are not committed to their children's Igbo language education. According to her, Igbo parents are full of excuses, blaming busy weekends or the lack of school buses to transport the kids to the language school. Chichi agrees that the lack of school buses is a valid concern, however, she pointed out that if Igbo parents are committed to Igbo language instruction for their children, they could certainly make time for it, as most of the parents take their children to soccer, piano and core subject lessons (math and English) on weekends. These lessons are not even free, unlike Igbo language instruction. Recently, Igbo elders did presentations on Igbo Indigenous knowledge and culture at the school to awaken the interest of students. The presentations involved activities such as Igbo cultural dances, Igbo stories, and the history of events like the Nigeria-Biafra War, which is an important aspect of Igbo identity in Nigeria.

Elder UK is an Igbo elder who has lived in Canada for more than thirty years. He is now a retired engineer. He is amongst the group of Igbos who came to the West in the late 1960s and early 1970s. When he earned his master's degree in engineering, he went back to Nigeria with his young family. His two older children learned how to speak Igbo fluently, while the two younger children were not fully immersed in the language before they returned to Canada in the mid to late 1980s, when Nigeria's economy and physical infrastructure started to deteriorate. Since then, Mr. UK has been living in Toronto and is one of the respected elders in the Igbo community. He is heavily involved in local Igbo community activities. He recently led the Igbo elders in their collaboration with the Igbo language school (see above), which is currently ongoing.

Students – I interviewed four high school students in the homeland - one girl and three boys, all aged 16 to 18 years. Their opinions were factored in the study. When I looked at their interview transcripts initially, I dismissed it as not very in-depth; however, at a closer look I discovered that their perspectives on the subject matter, while different from that offered by the adults involved in the study, equally contribute significantly to the study. I observed thirteen children aged 4 to 12 in the Igbo language school Toronto for close to a year. I interviewed one of the students in the language school, though his understanding of the topic was limited. However, through my interactions with them, I learnt much about their disposition towards Igbo language.

Chapter Six

Saving Igbo Indigenous Knowledge and Language

This chapter presents participants' views on the research topic, in other words, what is garnered from the participants in the study. This interpretation and its analytical considerations are organized into themes with linkages to literature and research findings. Before I proceed, I want to point out that in most cases, the participants used Igbo Indigenous and Igbo language synonymously as it is believed that Igbo Indigenous knowledge and Igbo language are one.

Sharing Igbo Indigenous knowledge and language narratives

In Chapter five, I discussed the research methods and methodology employed in this study and other pertinent information, such as the number of participants, description of participants and the rationale for the choice of methodology. To avoid repetition, I will not reiterate the details. For analytical convenience, I compartmentalized the issues that resonate throughout the interviews and fieldwork into twelve categories. The order in which the categories appear is insignificant, however, the first in the list – Igbo perception of Indigenous knowledge, is placed at the beginning so as to understand the views of the participants' vis-à-vis the topic of study before proceeding to the discussion of issues concerning Igbo Indigenous knowledge. For the purposes of respecting the views of participants and as well as to give them voice in the research, I present participants' perspectives regarding the decline in Igbo Indigenous knowledge and language as opposed to expressing my own opinions.

The theme areas I identified are grouped as follows:

Devaluation and consequences

The Igbo perception of Indigenous knowledge (including uses of Indigenous knowledge in traditional Igbo society);

The valuation of Indigenous knowledge in contemporary Igbo society;

Who to blame? The youth vs. adults (or the elders) in relation to Igbo

Indigenous knowledge/language decline;

Western influence, capitalism and the conveniences of western development:

the challenges they present to Igbo Indigenous knowledge preservation;

Challenges presented by Christianity and Pentecostal movements in preservation of Igbo Indigenous knowledge;

Implications to maintain Igbo Indigenous knowledge

Participants' perception on Igbo traditional medicine and the health consequences of abandoning the practice;

Igbo worldviews in relation to justice, respect, sharing/communalism and nature;

Participants' view on integration of Igbo Indigenous knowledge and Western knowledge in school curriculum;

Mother tongue as a symbol of identity: Its importance in education and the pedagogical consequences of neglecting Igbo language instruction;

Homeland vs. diaspora perception of the other and also factoring “locatedness”
in intergenerational transfer of Indigenous knowledge/Igbo language;

Challenges to preserve Igbo Indigenous knowledge

Social and ecological consequences of neglecting Igbo Indigenous knowledge;

The challenges of preserving Igbo Indigenous knowledge;

Practical ways to regenerate interest in Igbo Indigenous knowledge/language.

Igbo perceptions of Indigenous knowledge

Mr. Mazi Nkwo, a teacher, employs the metaphor “a tree without a root” to describe an Indigenous society without Indigenous knowledge.

Our Indigenous knowledge is what makes us who we are; it is the norms, values and practices that sustained our forefathers. Before a tree stands, it must be firmly rooted on the ground. A tree without roots must fall (Mr. Nkwo).

Mr. Nkwo states that the Igbo Indigenous knowledge includes norms, beliefs, values, and practices that make us who we are. Furthermore, he notes that Indigenous knowledge in traditional Igbo society is an unstructured, informal knowledge and is mainly transmitted orally from generation to generation. According to him, Igbo traditional knowledge finds expression in the social and cultural institutions of the society, such as the age-grade, and cultural festivals such as masquerades, *okorocho*, the New Yam Festival, *Oru Owere*, and others.⁵

⁵**Okorocho** is a colourful folk-dance festival symbolizing the remembrance of the ancestors. Okorocho is danced by the Mbaitoli Community in Owerri Zone, Imo State. The **New Yam Festival** is a festival of the Igbo people held at the end of rainy season in early August. It symbolizes the beginning of the harvest, and yam (the king of the crops) is offered to the ancestors and the god of yam. A variety of festivals mark this

Deconstructing his understanding of Igbo Indigenous knowledge, Mr. Oha, a school principal, argues that Igbo Indigenous knowledge like the Western knowledge systems is hierarchical. He contends that early sources of knowledge include folklore and children's moonlight games, which are perhaps an expression of folk tales, while knowledge and skills used in farming practices, storytelling and legends (*akuko ufo*), knowledge of the market days and the Igbo calendar present the secondary knowledge. A higher level of Igbo traditional knowledge includes spiritual, religious, medical, scientific and mystical knowledge. This level, according to him, can be compared to a university education, and the possessors of the tertiary knowledge are equivalent to university professors in the Western knowledge system.

When I asked the youths (students) their understanding and perception of Igbo Indigenous knowledge, they used the following word clusters and phrases to associate Indigenous knowledge: “the way we do our things,” “our culture and our age grade” “cultural festival such as *Ugwuekwema* celebration – *involvingyam roasting*, new yam festival, *Mbubuzo* – *a corn roasting festival*.” One of the students further said “our cultural festival brings the community together. During these festivals, a knowledgeable elder recounts the history of our origin – how our ancestral father Owere left Uratta to Ekwemaraugo, this is how our history is passed to younger generation.”

Gender did not seem to register significantly in the understanding of Igbo Indigenous knowledge. Ada, a female teacher states that:

celebration, such as masquerades, and folk dances. Palm oil is used to eat the roasted yam. In modern Igbo society it has become a family celebration. **Oru Owere** is celebrated in remembrance of the founding of Owere Nchi Ise (Owerri Municipality). Ekwemarugo left his ancestral home in Uratta to be the founding father of Owere. It is an annual ceremony that reminds Owere (Owerri is the colonial spelling of the town) of its origin and ancestors.

Indigenous knowledge is the foundation of a place, and also the beliefs, acceptances, rejections, norms, morals and values of a place. For example, you cannot pluck someone's fruits; you must take permission from the owner.

She contends that in traditional Igbo society, the norms and beliefs are handed to the child by the parents, and these norms and beliefs slightly differ from one locality to another.

However, another female, Lady Ogbaku, a teacher and a traditional healer, associated Indigenous knowledge with a strong sense of morality:

Our culture teaches us blood relationship, for instance, one should not have sexual relationship with any close member of the kindred. In some places, an entire community is barred from intermarriage. The strong morality inculcated in me in my childhood is still with me.

In addition, Mr. Oha states not only that Igbo Indigenous knowledge offers the cultural norms and practices that guide the society, it is also the foundation upon which knowledge related to weather forecasting, telling time of the day, planting of crops, preservation of food, hygiene, traditional medicine, and road maintenance are derived.

Valuation of Indigenous knowledge in contemporary Igbo society

The assessment of Indigenous knowledge in contemporary Igbo society differs subtly among the participants in the study. Lady Ogbaku, a female teacher and a practitioner of traditional medicine, believes that the Igbo people no longer value their traditional knowledge. Here is how she appraises Igbo Indigenous knowledge:

They don't value their Indigenous knowledge because of what they have been exposed to, such as the media, TV, and the influence of Western culture. Igbo Indigenous knowledge is gradually dying out. The Western culture has taken over our Indigenous knowledge. Before, the girls didn't normally wear men's attire (pants and trousers). Now they are doing it.

The boys now braid their hair. Robbery and violence are now rampant in our society. Before, these things were very rare.

Above, Lady Ogbaku points out that exposure to media and Western influences contribute to the decline of Indigenous knowledge. She equally attributes anti-social behaviours such as robbery, violence, and cultural deviations exemplified in boys and girls dressing in ways antithetical to norm of the culture and caused by Western influences.

Similarly, Mr. Amawom, a well-respected elder and retired civil servant turned farmer, appraised Igbo Indigenous knowledge with the statement below:

Igbos do not value this culture anymore. One, the youths no longer listen to their elders, and by virtue of development, if one is educated in the Indigenous ways, he is no longer relevant. Science and technology are not products of Indigenous education, so indigenous knowledge has no relevance in present-day Igbo land.

The elder's statement is laden with emotion. He laments that the youths no longer listen to their elders and, by conforming to western development standards, Indigenous knowledge may not be of much value to them in today's Igbo society.

Correspondingly, Mr. Nkwo, an elder strengthens the perception that Igbo Indigenous knowledge has declined by invoking Achebe's *Things Fall Apart* to make his argument:

Achebe's *Things Fall Apart* depicted the erosion of Igbo indigenous culture. In fact, things have fallen apart in Igbo society, thus the Igbo are like a tree without roots.

It does look like the older folks are on the same page in this argument. However, in contrast, when a student that represents the opinion of the youths was asked to assess the state of Indigenous knowledge in contemporary Igbo society, he responded as follows:

There are cultural practices done before which are no longer existing now due to Western civilization. But still, young people are involved in our tradition. I am advising young people not to allow our Indigenous knowledge to die off. No matter the level of Western education we have attained, we must not forget our roots. The community gathers to observe the New Yam Festival. This ceremony is usually done in August every year. People are beginning to have awareness of traditional knowledge and practices. Young people partake in this festival/ceremony, and this is how we renew our culture.

The preceding statements illustrate how Igbos perceive and assess Igbo Indigenous knowledge in the contemporary Igbo society. However, a closer look at the statements of the older and the younger participants indicate subtle differences in each groups views. While the youths express some optimism, the older ones are not that hopeful regarding the valuation of Igbo Indigenous knowledge in contemporary society. That leads this conversation to the next discussion topic, which explores how each group blames the other for the decline of Igbo Indigenous knowledge.

Who is being blamed? The youth vs. adults (or the elders)

Most adults in the study contend that the youth are to be blamed for the decline and lack of interest in Igbo Indigenous knowledge. Elder Amawom, quoted above, indicates that the youths no longer value Indigenous knowledge anymore and also do not listen to their elders because they are more interested in western ways of life, He emphasizes this point in stating that:

The younger ones are not tutored in the culture and tradition; they behave any how without an incline of respect. If you tend to correct them, they may misconstrue your actions and tag you non-progressive element.

In like manner, Lady Ogbaku, quoted above, affirmed that western culture has taken over Igbo Indigenous knowledge, and the youth's exposure to western culture through the media impacted on their behaviour, as in the girls wearing pants and boys now braiding their hairs. Both of these participants indicate that western influence such as TV, various Medias, and not being tutored in the tradition and culture might be responsible for their attitude towards Igbo Indigenous knowledge.

On the contrary, the youths stressed that they are not taught Igbo Indigenous knowledge because parents have failed to do their work. Below, a student argues in this context:

The issue of the youths becoming interested in Igbo Indigenous knowledge depends on their parents. Some parents don't teach their children how to speak Igbo. As of day one, these parents ignore our tradition/culture/language and speak only English to their children. So when such children interact with us, they find it difficult to speak Igbo and adapt to our culture and life because their parents did not show them the example initially (Student 1).

Likewise, another youth concurs by stating that:

Learning Igbo language and our Indigenous culture depends on the parents. If the parents are interested, the children will also be motivated. Parents should start taking responsibility (Student 2).

In the same token, another youth agrees with his contemporaries as per the following statement:

Parents should encourage their children to learn Igbo language and our culture. They should stop thinking that when their children speak only English they have arrived or doing the right thing. Although English is important, I think our Igbo language is more important. I would like my children to learn our culture and speak Igbo fluently. Young people should participate in our cultural traditions, when you participate, you will never forget the experience. For example, my experience at Emi festival is very interesting. These cultural festivals bring people together, and it strengthens love and unity (Student 3).

In addition to this, a youth states that he is fortunate to have a grandfather that teaches him the tradition and how to speak Igbo:

I am lucky that my grandfather teaches me Igbo language. When I speak Igbo wrongly, he corrects me (Student 2).

Given these points, we can see that conflict exists between the generations in regards to who is to take responsibility for the decline in Igbo Indigenous knowledge and language. As can be seen, the older generation blames the younger generation for having no interest in Indigenous knowledge, citing Western influence and the media as having contributed to the “disorganization of Igbo Indigenous knowledge” as an elder puts it. Whereas the youths argued that it is not that they are uninterested but the fact is simply that the older generation have neglected their responsibility to “pass the knowledge to them.” It is important that the issues raised by the opposing sides be critically examined in order to mitigate this dilemma and perhaps find ways to preserve Igbo Indigenous knowledge.

Western influence, capitalism, and the conveniences of western development

In light of the above, it can be seen that the older participants in the study attribute the decline in Igbo Indigenous knowledge to western influences. I now examine some of these western influences. From a critical standpoint, capitalism and conveniences of Western development can be attributed to western influences for the reason that Igbo society and by extension other African societies became entangled with these processes and way of life as a result contact with the West, which originated from colonialism explored earlier in this work. To further buttress this force as an important influence, let’s examine the participants views on a number of issues in relation to Igbo Indigenous knowledge.

First, how do Igbo Indigenous ways fit into capitalism? Elder UK thoughtfully said this about capitalism:

Our own ways could be a lot better. You could borrow money from your people or community with little or no interest. You could acquire farmland and use it for so many years, only for it to be given back to the original owner at the payment of the original amount of money. Our Indigenous ways are far from capitalism, so we cannot use our Indigenous ways of life to thrive in a capitalist world. But unfortunately, capitalism has encroached so much on our way of life. Now, everybody is competing with one another, which is now bringing the do or die attitude, making people go haywire. People are doing all sorts of things to be on top. In traditional Igbo society, it used to be about sharing, not about profit maximization and individualism. We used to be like soldier ants working together. We are losing our core values; it is becoming individual survival of the fittest instead of the well-being of the community. In fact a lot of things have gone wrong (Elder UK).

The elder made a clear case as to how Igbo Indigenous knowledge is antithetical to capitalist ideologies, which has displaced the communal sharing system in Igbo Indigenous society. Similarly, arguing in the same manner, Mr. Oha contends that parents and young people associate progress with Western knowledge and that may present some challenges to the preservation of Igbo Indigenous knowledge. He states:

Parents will always associate progress with Western knowledge. If you are teaching your children Igbo IK, and they go out there to face a world that is so capitalistic and dominant in Western science, how can we then convince parents' that IK is indeed valuable? Is there any material gain accruing from this kind of knowledge system? (Mr. Oha).

Additionally, Ada argues that the emphasis on material gains has affected the development and preservation of Igbo Indigenous knowledge.

There is lack of interest in Igbo Indigenous knowledge because the young men and women want money. They want quick wealth, so any thing you're introducing to them that does not bring quick wealth, they wouldn't like it. The rush for money and recognition makes them to avoid Indigenous knowledge and

go towards Western knowledge because that is where the money and recognition is.

Also, arguing in the context of how the conveniences of Western development had affected the preservation of Igbo Indigenous knowledge, Mr. Oha states that:

Western development is so convenient that people are now forgetting the Indigenous ways of doing things. For instance, I now have my water system toilet instead of digging the ground because it is more convenient to have a water system than the local way of digging the ground for the toilet. The convenience of development is one of the reasons why people are no longer practicing the old ways and our Indigenous knowledge is embedded in these old ways. For that reason, Igbo Indigenous knowledge is dying. Most Indigenous ways are cumbersome; they involve longer processes than the convenient Western ways. For example, if I am sick with malaria, it doesn't mean that there are no herbs I can gather from the bush, cook them, and drink the water or bathe with them, but it takes a long time. Alternatively, I can easily go to the pharmacist and buy malaria drugs [medication], and drink it, and in the next four hours I will start feeling better. If you look at the process of preparation of the herb, you will say it doesn't worth it, I would rather get what I want from the drug store. The time required to get this local herb prepared could escalate my situation and eventually result in death. This outweighs the need for Indigenous knowledge, but really we still make use of Igbo Indigenous knowledge in all spheres of life. I think modern Western ways have inhibited Igbo Indigenous knowledge development (Mr. Oha).

I see some contradictions here; in his earlier statements he blames Western influences for the decline of Igbo Indigenous knowledge, and now it appears that he is eulogising Western knowledge over Igbo Indigenous knowledge, I, however, understand the point he is trying to make.

Another elder in the diaspora, speaking about the influence of Western culture in the Igbo Indigenous community, has this to say:

There is a wearing off of Indigenous knowledge because of the intrusion of Western influences, and culturally that is not good for *Ndi Igbo*. People are losing what makes them an Igbo. It becomes a little difficult to

pinpoint exactly where we are going as a people. The Igbo is bending so much towards the Western way of life, and our Indigenous knowledge is drifting away. Most of our children may not be able to speak our Indigenous language just because of the Western influences. In their youth, they are going to speak like the Americans or the British while they are in Lagos. So that is the effect of Western culture that is becoming so pervasive. The parents have no control of this, even if they want them to be Indigenous, they don't have any control any more. So to get them to be interested in the Indigenous ways we have to catch them young (Elder UK).

As can be seen from the above statements, the participants in this study have identified three related issues, Western influences, capitalism, and conveniences of development, as presenting enormous challenges to the preservation of Igbo Indigenous knowledge. Closely associated to the trio, furthering the challenges in preserving Indigenous knowledge, is the impact of the media on local culture, elder Amawom argues.

The influence of the media has disorganized this system of knowledge. Our people are no longer interested in Indigenous knowledge. Our Indigenous knowledge is synonymous with our culture. Our culture is bastardized and so is our Indigenous ways of life, it is no longer what it used to be. The elders that inculcate the knowledge are now reluctant to teach this knowledge to the youth because the youth are more inclined to the Western ways they see in the media, so when we try to speak to them about our Indigenous ways, they no longer listen nor are they interested. That is why Indigenous knowledge no longer play its role in modern society. The younger ones no longer relate to Indigenous knowledge, so in my assessment Indigenous knowledge is dying a natural death (Elder Amawom).

Having discussed participants view on how Western influences, capitalism and the conveniences of Western development impact on Igbo Indigenous knowledge preservation, I now discuss the challenges presented by Christianity in the preservation of Igbo Indigenous knowledge, as Christianity is arguably a Western influence because it came to West Africa as a result of contact with the West.

Challenges presented by Christianity and Pentecostal movements

Speaking about the impact of Christianity on Igbo Indigenous knowledge, a student in this study observes that:

We like our culture, but some people think these practices are fetish or pagan ways – those brain-washed in Western Christianity (Student 3).

According to this young man, some of them that like to practice Igbo culture are inhibited from identifying with the culture by elements who think that Igbo cultural practices are anti-Christianity, and these are people brain-washed by Christianity.

Also, speaking on how Christianity has impacted on Indigenous beliefs, Ada, correspondingly argues that:

Christianity has affected our Indigenous knowledge, so many of our Indigenous beliefs are being removed. Christianity is covering them up because some of them are not acceptable to Christianity. Every day changes are coming into our society.

Furthermore, Elder Amawom also holds that Christianity has presented a lot of challenges to the preservation of Igbo Indigenous knowledge. He made the claim quite elaborately with the following statements:

An obvious one is the new churches (Pentecostal churches), the so-called born again, who are more Catholic than the Pope. They cut down every big tree and forest, and dub them evil forest saying that spirits dwell or live there. I don't know when spirits left the heavens which is their abode, and started inhabiting in trees. Some of these Pentecostal churches tell their members not to eat *oha* leaves because traditionally most shrines are built with the *oha* tree. And when they see an *aboshi* tree in your compound, they may tag you a pagan. The earlier the new churches shelve or abandon all these dogmatisms and get educated and become ecologically friendly the better for us. Even if the spirits are living in the trees,

they should let them be. They don't know how many years it took the trees to blossom that big (Elder Amawom).⁶

The elder quoted above is exasperated by the Pentecostal movement's destruction and relegation of collectivist traditions, symbols, and ecological resources in the name of Christianity. And being an insider to this culture, I know that most shrines in Igbo land are made with *oha* trees and that the leaves of the tree are used to make a delicious, culturally symbolic soup, popularly known as *oha soup*. The *aboshi* tree serves two main purposes: it is used to build shrines and it can be used to make boundaries between two compounds or farmlands. According to the elder, these two symbolic trees in traditional Igbo society have been termed evil trees by some of these people in the Pentecostal churches because they are used in building shrines of deities.

The decline of Igbo traditional medicine

Perception differs among participants with regard to Igbo traditional medicine. Some have positive attitudes toward it while others are unfavourable. I begin with those that express positive attitude to Igbo traditional medicine. Mr. Nkwo, a strong believer and adherent of traditional medicine, states that the Igbo Indigenous herbs are medicinal and some mushrooms found in the forest equally have the potency to cure certain diseases. He contends that his father who died in his late nineties lived a healthy life because of his reliance on Igbo traditional medicine. He suggests that the reason why there is high prevalence of diabetes, high blood pressure, and other related diseases is because people

⁶ I would like to observe that Elder Amawom's views on Pentecostal Christianity above indicates a divergence from the views of scholars cited in previous chapters who hold that Pentecostalism has been influential precisely because it resonates with aspects of African religion. However, in spite of any resonances it has with African traditional religion, Pentecostalism remains a philosophy rooted in Christianity, which fundamentally shifted African belief systems and ways of life.

have turned away from the Igbo Indigenous medicine, and largely embraced western processed food.

Similarly, Lady Ogbaku, a teacher, as well as a traditional medicine practitioner, advocates strongly in favour of Igbo traditional medicine.

Lack of use of our Indigenous plants has affected the health of our people. Every herb or shrub in Igbo land performs one or more functions. In the older days, people harvest these herbs. They boil the roots or the leaves and drink. It serves as their medication for treatment of different kinds of ailments. They never go to the hospitals. Now everybody goes to the hospital even with a headache. Very few people value traditional treatment. We should be less dependent on Western orthodox medicine. I treat kidney problems, infertility and other ailments with some herbs and shrubs. For instance, a lady was experiencing infertility, and she came to me, and I gave her some of my herbs. Now the woman is pregnant with a baby. I also treat sexual transmitted diseases such as gonorrhoea. I usually ask the patient to go to the diagnostic laboratory, where the result identifies the disease. Then I will use my herbs to treat the patient, and when treatment is finished, I ask the patient to repeat the test.

The irony of it all is that the traditional medicine woman recognizes that Western orthodox medicine can complement Indigenous medicine. This is a great example of complementary epistemology, which is explored later on in this subsection. Furthermore, a youth recounts his experience with traditional medicine through his uncle:

My uncle heals *agba* (boil) and uses *mkiporokwu* (herb roots) to cure it. Up till now when people come to him for treatment, him and I will go to the Nwaorie River, and collect the herbs. I have forgotten their names but I can identify the leaves. With invocation and incantations, he will say some things – which no one can understand except him. He cooks the leaves with water, and the patient drinks it or bathes with it. I think traditional medicine is useful to us (Student 1).

Likewise, Mr. Oha believes in Igbo traditional medicine, however, he thinks that the process of preparing traditional medicine is cumbersome. He makes his argument clearly below:

Most Indigenous ways are cumbersome; they involve longer processes than the convenient Western ways... Alternatively I can easily go to the pharmacist and buy... drugs (medication), and... in the next four hours I will start feeling fine. If you look at the process of preparation of the herb, you will say it isn't worth it, I would rather get what I want from the drugstore. The time required to get this local herb prepared could escalate my situation and eventually result in death. This outweighs the need for Indigenous knowledge, but really we still make use of Igbo indigenous knowledge in all spheres of life.

Although part of this statement has been cited earlier, it goes further to illustrate mixed feelings this participant has for Igbo traditional medicine. Other mixed feelings abound on traditional medicine. Hear a youth recounts his experience with traditional medicine:

There was a time I traveled to visit my uncle in Aba, and I developed a malaria symptom. Then my uncle took me to a traditional medicine woman. Initially, I was scared of drinking the concoction she made, it was smelling bad and very bitter but my uncle encouraged me to drink the medicine. I did, and in about one hour, I started feeling much better. Traditional medicine is good, but they should regulate them so that people can feel safe with their practice. They should test their claims before they can be trusted since they are dealing with peoples' lives (student 3).

Again, this young man continued his mixed feelings on traditional medicine with this testimony:

Some traditional medicine practitioners are good such as the born healers. It is a gift passed from one generation to another. This family in Orodo has that gift from their ancestors. They know how to treat broken bones.

Conversely, there are participants who out rightly disfavour or disregard Igbo traditional medicine. For instance, this young participant expresses negative attitude towards the practice:

We have local traditional doctors, who do not know what they're doing. In fact, most of them make bogus claims. I was born in a modern hospital so I go with the modern way of medicine. I am of the feeling that Igbo traditional medicine will disturb my system (Student 4).

From the foregoing, it can be seen that there are different perceptions about traditional medicine depending on one's experience or disposition to the practice. Some expressed positive views, while some loath the practice. However, some also express mixed feelings about its use.

Igbo worldview of justice, respect, communalism and nature

The older participants identify justice, respect and communalism as the hallmark of Igbo worldview. In their opinion, these worldviews defines the way in which humans relate to other humans and even to nature. Lady Ogbaku notes that “she was taught to respect her elders right from childhood.” While Elder Amawom, declares that “the respect for elders is crucial in Igbo land, and that influenced my life. And it made us to be at peace with everyone.”

The principle of justice and respect, according to Mr. UK extend to the rest of nature – animals, wilderness, forest, rivers etc. He recounts how many Indigenous species are endangered or on the verge of being extinct, such as *ubena* – a wild grape-like fruit. He laments this unfortunate phenomenon, in the following statement:

Many of our Indigenous plants and animals are endangered or extinct because we did not take time to preserve them. For example, the *shekeleke* bird is on the path of extinction. To illustrate how we respect nature in the olden days, there is a big forest between *Azaraegbelu* and *Ubowala* and my village, just by the river. In those days, the community place a prohibition there. You cannot hunt in that forest until a special celebration day called *Uguzo*, which is the only day in a year you are allowed to hunt there, but now people have started neglecting the rule. They have resorted to burning the bushes so when the animals try to escape, they kill them.

This is a demonstration of how traditional practices regulate sustainable use of resource. Also commenting on sharing and communalism, a core value of the Igbos, Elder UK laments that:

Our communal living is shrinking. It used to be sharing of the resources and people looking out for one another, in fact the communal way of life is eroded. Before, the Igbos are like soldier ants working together, but now the Igbos are like crabs in a barrel pulling each other down as they attempt to climb out of the barrel. We are losing our core values. Our society is becoming an individual survival instead of a community survival and wellbeing.

The participants, as can be seen from the above, lamented over the loss of Igbo core values, which unfortunately has resulted in social and serious ecological problems.

Integrating Igbo Indigenous and Western knowledge in school curriculum

All the teachers interviewed in this study subscribe to the idea of integrating Indigenous knowledge into the Western-style school curriculum, and I would say that most of them are doing the best they can by incorporating little bits of Indigenous knowledge here and there into a predominantly Western knowledge curriculum. The question is: what quantity and quality of Indigenous knowledge is being integrated, and how well are teachers systematically incorporating it into the curriculum? Let's find out by looking at their comments and experiences in the classroom. Below, Mr. Oha comments how a viable education process could help the passing of Igbo Indigenous knowledge to the younger ones.

You see, Western education has inhibited the full exploitation of Indigenous knowledge because when our children go to school, the Indigenous knowledge they are supposed to know as Igbo is ignored. Igbo indigenous knowledge is still there, but we have to find a way to pass it on and that is through a viable education process if the government can implement it in the school curriculum (Mr. Oha).

Furthermore, regarding the mode of integration, he states that there is no specific topic or subject as Indigenous knowledge, however, some teachers draw from their repertoire of Indigenous knowledge in teaching the students.

Well we don't teach Indigenous knowledge as a subject but we make use of it in our teaching. There is nothing like "the topic today is Indigenous knowledge" but we make use of Indigenous knowledge on a daily basis and part of Indigenous knowledge is fused into other subject areas like civic education, social studies, basic education and basic science. It is taught bit by bit but the majority is Indigenous knowledge that the students learn at home and bring to the school (Mr. Oha).

On the other hand, Mr. Nkwo argues that integration of Indigenous knowledge and western knowledge already exists in the school curriculum, and its origin is right from the missionary schools, however, its implementation is poorly coordinated.

There is already a coexistence of Indigenous knowledge and Western knowledge in the curriculum, but the problem is implementation. The fact is that we cannot do without Western knowledge in the school. Western ways have permeated into Igbo culture. What we now have is a mixture of the two cultures to a certain degree, and this has its origin in missionary education (Mr. Nkwo).

Additionally, while making his case for integration, Mr. Oha argues that in order to resuscitate Igbo Indigenous knowledge it has to be enshrined in the curriculum along with the Western school curriculum. He contends that since the majority of children go through the school system, the school must be the most viable way of keeping Igbo Indigenous knowledge alive.

The integration of Igbo Indigenous knowledge into the curriculum will play a good role in the resuscitation of our Indigenous knowledge. Every parent wants his/her children to go to school. Presently, more than 85% of children are in

school.⁷ If Igbo Indigenous knowledge is incorporated into the school curriculum, we can now teach Igbo Indigenous knowledge and Western knowledge side by side, and this would provide children with the opportunity to learn our Indigenous knowledge since the parents are no longer teaching them the knowledge at home. This makes a case for the integration of Indigenous knowledge alongside Western knowledge (Mr. Oha).

Also arguing in support of integration, Mr. Oha stresses how exposure to both knowledge systems could facilitate an understanding of concepts with a specific example:

In the integration, Western knowledge should serve as an avenue to renew and spread Igbo Indigenous knowledge. Our Indigenous knowledge would help Western knowledge as well. The students come to school with Indigenous knowledge learned from home, and we then teach them the Western education. I know this because I teach in the rural area. The Indigenous knowledge they bring from home is good for us (teachers) and for them (students). Some of the things we teach them, they already know in the traditional ways, such as medicinal herbs. If you ask them (students) to mention one plant in their locality used as a medicinal herb, they would mention the neem tree (*ochonye ogwo* is the Igbo name). The bark and leaves are used to treat malaria. The Indigenous knowledge they already have enables them to understand the concept of medicinal plants. They know the Igbo name but may not know or name the tree with its English or scientific names (Mr. Oha).

Based on the conversations above, it is clear that the teachers in Igbo land support integration of Indigenous knowledge with Western knowledge, and also pointed out some pedagogical advantages of integration, although they agree that the concept is not properly thought out or implemented.

Mother tongue as a symbol of identity

⁷ This statistic is not verified, but I believe that many parents send their children to school because of the obvious benefits of Western education and in view of the government's implementation of the UN millennium development goals. I doubt if this statistic holds in the Northern part of the country, with a huge Islamic influence, as until recently, people there have resisted Western education.

Elder UK indicates not only that the Igbo language (mother tongue) is a symbol of identity; it also enhances inter-generational knowledge transfer and the teaching and learning of Igbo Indigenous students. The following statements from some participants in this study underscore the importance of incorporating the Igbo language instruction in the educational experience of young Igbo children, and also demonstrate the pedagogical consequences of neglecting Igbo language instruction.

The minimal use of Igbo has affected us in a big way. For instance, I went home sometime ago and my niece's son came and we were asking him questions in Igbo and he was answering in English. We asked him in Igbo "what do you want to do when you grow up?" I think he understood us quite well in Igbo, but he replied in English "I want to count money" which means he wants to be an accountant because his mother works with the bank. He understands, but didn't want or couldn't speak in Igbo. I think a lot of these young people will lose the language if we continue in this way by not encouraging the children to speak our Indigenous language (Elder UK).

In the above statement, Elder UK who lives in Toronto narrates his experience when he travelled home (Igbo land). He expresses disappointment that his niece's son was unable to respond his questions in Igbo language, even though it appears that he understood what he was asking him. Further below, Elder UK points out that the yearning for the West, and the erroneous belief by some parents that when their children speak English, it signifies that they have succeeded, contributes to the problem. In addition, he opined that the increased flow of Western media has equally added to the decreased use of the mother tongue.

It is the yearning for the so-called western culture. They look at it as prestigious if their children speak English. It means that you have advanced your children more than the other people. Now there is the media – TV and internet all are in English and children copy these cultures

very quickly. Even their toys and some of their TV programs are talking about things happening in the West -- for example, Christmas songs, I dream of a white Christmas. A poor African child dreaming of a white Christmas! They don't know what a white Christmas is; there is no snow in Africa, so the influence of the West is very much the cause of the decline of our language and Indigenous knowledge. Many homeland parents themselves seem to want it for their children because of the illusion that you have arrived and that you have an educated family (Elder UK).

Similarly, Elder Amawon, a home-based elder, blamed the parents and the school system for the declining use of the mother tongue. He suggests that Igbo language should be made compulsory in the school system.

Likewise, Mr. Oha holds parents responsible for the decline in Igbo language by preferring to speak English to their children instead of Igbo, and that the school system too has relegated Igbo language to the sideline. He emphasizes that such behaviour has hampered the preservation of Igbo language.

An average family now instead of teaching their children how to speak the Igbo language, they prefer to speak English. In most of our schools today, we don't have time for Igbo as a subject, so to that effect the less use of Igbo has hampered the development of our Indigenous knowledge (Mr. Oha).

By the same token, Lady Ogbaku corroborates the above comments and equally blames parents for not taking the Igbo language learning of their children seriously, instead preferring other languages such as English and French. The reason that children don't speak Igbo is because of the way they are brought up. Some parents don't want their children to speak the Igbo language. They prefer them to speak English and French, just to make them feel socially elevated, so that when they come back home, they will be speaking "fre fre fre," Who are you trying to impress? That is wrong. They should learn the Igbo language (Lady Ogbaku).

Commenting further on this issue, Elder Amawom advises that Igbo language instruction must begin at the formative stages, and it has to continue all the way to secondary school.

I have said that we should start from the beginning to teach our children Igbo language, and make it the language of instruction from kindergarten to junior secondary, because one will first dream and think in his/her native language before translating to English or any other language. The mother tongue is very important and it should be encouraged and made compulsory (Elder Amawom).

Ada, a school teacher, recounting her pedagogical practices in relation to Igbo language instruction, states:

We integrate both languages [Igbo and English], although English is more dominant. When you teach them in Igbo, understanding is better (Ada).

Interestingly below, Mr. Nkwo accuses teachers of colonial mentality by relegating Igbo language to vernacular status and also by punishing students who speak the language in their class.

Some teachers with colonial mentality do not allow their students to speak Igbo in the class.⁸ In fact there is a time for vernacular, and if you speak Igbo outside of those times you will be punished, and that is bad. But the school authority is putting that to a stop because we want to encourage the speaking of the Igbo language. Some students don't know how to speak English and some are shy to speak English, so what happens is that they remain silent and don't participate in the learning experience in the classroom, and that also affects their learning and confidence. The Igbo language should be incorporated into the curriculum at all levels and in all subjects. Igbo makes learning concrete and abstract concepts are made more tangible to the Indigenous students (Mr. Nkwo).

⁸ Teachers with a colonial mentality who do not allow young Igbo children to speak their language are similar to those in residential schools in Canada. Colonial systems globally enforced that students should not speak their mother tongue. Colonized cultures have in fact incorporated the worst elements of colonial subjugation. Grant (1996) points out that the aftermath of Indian residential schools in Canada exacted a huge toll in terms of human suffering for the First Nations people of Canada. The language policy, which suppressed the speaking of indigenous languages, also suppressed the culture of the people. Residential schools were replete with sexual, spiritual and psychological abuse of the native students. The consequence of this is that most First Nation peoples' indigenous languages are extinct, and the people are yet to heal from the social, emotional and psychological hurt today. The government of Canada has embarked on a reparation process to right some of the wrong.

In light of the above, Elder Amawom illustrates the educational implications of negating the mother tongue in schooling:

If you don't know the Igbo name for something, how would you tell someone that such a thing or plant exists? For example, in the English language, there are vowels, figures of speech, metaphors, etc. We have them in the Igbo language too. Now, if a child does not know or understand what all these mean in Igbo, tell me how the child could possibly understand them in English. If they know all these concepts in their mother tongue, it will be very easy for them to make the connection in English. This is why students don't do very well in English in the WAEC [West African Examination Council]. The grammar aspect of English is very hard for the students. Although some of them can write essays and respond to questions in reading comprehension to some extent, but still their grammar is very poor. They don't know the rudiments of the Igbo language. If they are taught Igbo, they would easily understand this in the English language. If they understand parts of speech in Igbo, they can easily make the connection in English. Since most of them don't know how to speak Igbo, it is affecting their learning of English language. Can you believe that in the WAEC this year only 20% passed English with a credit, while the rest got an ordinary pass or failed? The reason is that they are not grounded in Igbo and that is affecting their performance in English (Elder Amawom).

Elder Amawom points out that when a child lacks knowledge of certain concepts in the mother tongue, it is very difficult for that child to make the necessary connection to a different language, and if they know the concepts in their mother tongue, it will be much easier to make a connection to English. He argues that when Indigenous students are learning concepts presented outside of their cultural context, the consequence is poor performance in standardized testing (observed in published West African Examination Council results).

From the conversation above, it can be seen that the participants are in support of Igbo language instruction in schools, and have also pointed the consequences of

neglecting mother tongue pedagogy. I defer my own view on this until the next section where I bring in my analytical considerations.

Factoring locatedness in intergenerational transfer of Indigenous knowledge

In grappling with the challenges of losing Igbo cultural heritage, both homeland and diaspora assign blame to each other. The participants' statements below give us an insight on how homeland and diaspora Igbos perceive each other in relation to Indigenous knowledge/Igbo language preservation and intergenerational transfer of Indigenous knowledge. Here below, Mr. Nkwo (homeland-based) argues that Igbos that live outside Igbo land conform to the culture of the places they are living in.

The Igbos are travelers. Some Igbos in Nigeria live in Yoruba land or Hausa land [the north of the country]. This group ends up not learning the Igbo language, like those that live overseas. Life is dynamic, so if you are living in a foreign land, you must conform to their ways of life, language, and culture in order to fit in. But you see there are Igbo, who live in Igbo land and nearby places like Port Harcourt, and yet their children don't speak Igbo; sometimes even the adults that live this nearby barely speak Igbo (Mr. Nkwo).

Mr. Nkwo points out here that those Igbo who live outside of Igbo land, but are still living in the country, in places like Yoruba or Hausa land, are also affected by linguistic and cultural dilemmas. Most appalling is that parents and their children living in places close to Igbo land also experience Igbo language deficiency.

Meanwhile, in furtherance of the argument that where Igbos are residing plays a great role in the speaking of Igbo language, Mr. Oha makes a case that those in diaspora are "experiencing other cultures" and therefore, assimilated into those cultures.

Location plays a great role. Those in the diaspora are experiencing the culture of other societies, and some don't have enough time and the nearness to educate their children in Indigenous knowledge and the Igbo language. The adults are also affected; over time those adults will begin to assimilate those cultures, but mainly children, because of the environment they live in. No matter how you try to teach them the language and Indigenous knowledge, it will not be the same as when they are interacting with their peers/mates in the homeland culture. Irrespective of the fact that we are trying to be more Western than the Westerners, there are still certain things we know culture-wise. It does not necessarily mean that here at home, children learning our language and Indigenous knowledge are taught by their parents; they learn it through interaction with their peers outside. Their parents want them to speak English, but through interaction with their peers they can learn Igbo and Indigenous knowledge (Mr. Oha).

Furthermore, Mr. Oha argues that even though some Igbos might be interested in preserving Igbo language in the diasporic locations, the fact that they are not living in Igbo land makes their endeavour less effective and fruitful. Moreover, he cites examples of Igbo preservation endeavours carried out by homeland people. This statement illustrates his argument:

Those in the diaspora have the resuscitation of Igbo language/Indigenous knowledge in mind but they cannot do it because they are not residents here. Those of us living at home are the ones who can do it to a certain extent. Our Archbishop, AJV Obinna introduced a program known as "*Odeni Igbo*," research written and presented in the Igbo language from A-Z. In all of the lectures and presentations, there will be no speaking of the English language. This program has been on for up to 10 years. It is done every year, just like the "*Ahiajoku*" [another program of the same kind]. The *Ahiajoku* lecture has been revived, and all presentations are written and delivered in Igbo. The materials are sold and stored at the National Archive or the Ministry of Arts and Culture in Owerri. Another priest, Bishop Njoku, has a program on Heartland FM radio in Igbo culture. These are some little ways those at home have tried to uplift Igbo Indigenous knowledge and language in Igbo land. So it is better done by those at home because those in the diaspora can only do meaningful things at home (Mr. Oha).

Similarly, Elder Amawom, another participant arguing in this context, uses much stronger language, such as “worst offenders” and “lost generation” to accuse diasporic Igbo of neglecting their cultural heritage.

Those living in the diaspora are the worst offenders. The Igbo living in the diaspora have been uprooted, and therefore, they have lost their balance. Unless one is well-grounded here before going over there, but the question is what of their offspring? One of my friends raising his family in the America said they are the lost tribe of Igbo land. Their parents may come back, but their kids may not, so they are a lost generation. We advise the parents over there to send them back here at an impressionable age, no matter how underdeveloped we may be, because that is their roots. The diaspora should get involved in recovering the Igbo language because the homeland people can still speak the language, though imperfectly, but I don't know how a child of an Igbo living in America all their life can speak or understand Igbo (Elder Amawom).

In contrast, Mr. UK, an elder living in Toronto, proudly mentions the programs initiated in the Igbo community to promote an interest in the Igbo language, while recognizing the challenges militating against these efforts. Interestingly, he equally berates diasporic Igbos for their lack of interest in promoting the renewal and regeneration of the Igbo language and Indigenous knowledge.

Over here, culturally we are trying to maintain the Igbo heritage school where attempts are being made now to teach our children the Igbo language. The last thing we did was in November last year, when we had the Culture and Heritage day for children in the Igbo language school. There were presentations in arts, crafts, and stories, and the teacher is calling on the elders to do it again. In the Igbo community meeting, we emphasize that people should send their children to Igbo language and heritage school where their children will seize the opportunity to learn the Igbo language. But unfortunately, only a few parents are doing that. The complaint most of them had was transportation. I think that is a flimsy excuse. If it is important for them they will make every effort to send their children there. There are Igbo parents who send their children to hockey

and other sports on the weekend, but why can't they find time for the Igbo language?

... The diaspora discourages the learning of Igbo language and Indigenous knowledge but it is still possible for one in the diaspora to at least maintain that Igbo identity. The homeland Igbo are also losing it because of the inclination to try to become what they are not. The diaspora are coming to terms with the recovery of our language and Indigenous knowledge more than the homeland because the diaspora know why we should go back to our roots, while there is some kind of laxity with the people at home. They don't really see the need to pursue that or the danger in losing our identity.

... Right now we speak English in the home. Unfortunately, that is when the kids are around, but for me and my wife it is Igbo. When the kids are together they speak English more amongst themselves. Sometimes when I get into arguments with them, whether in science or politics, it is English, but sometimes Igbo is interjected. My older girls sometimes speak in Igbo with us, unlike the two younger guys who are not grounded in the Igbo language.

... To encourage children born in the diaspora to speak Igbo, parents should take a long vacation home and also invite the grandparents here to spend some time with them (Elder UK).

Although a rather long statement, Elder UK recognizes that living in diaspora to a large extent affects the speaking of Igbo and the preservation of Igbo cultural heritage, but he acknowledges that with effort and commitment it can be done. However, he argues that Igbos at home are "losing it" because of their inclination to be Western.

Social and ecological consequences of neglecting Igbo Indigenous knowledge

Participants identified crime, greed, individualism and competition as some of the social consequences of neglecting Igbo Indigenous knowledge, while they also acknowledged the loss of Indigenous resources as the ecological consequence of neglecting Igbo Indigenous knowledge.

Above I offered the voice and views of the participants in this study about the preservation of Igbo Indigenous knowledge. Having gained insights from them, I now build my analytical considerations into eight categories making clear links to literature pertinent in the research.

Raising Igbo Indigenous knowledge and language consciousness

The following analysis is organized around eight major themes, which may be similar to participants' discussion themes explored above, however, the difference here is that these are my thoughts with linkages to literatures that inform this study. I hope the reader understands the malleability of these themes, as they are not rigidly separated from one another. Indeed, they constitute a demonstration of the wholeness of Indigenous knowledge as opposed to rigidly compartmentalized Western knowledge systems.

The categories are:

- a) A valuation of Indigenous knowledge in contemporary Igbo society;
- b) Western influences vis-a-vis capitalism and the conveniences of Western development and how these impact on Igbo Indigenous knowledge preservation;
- c) Igbo worldviews and traditions, including justice, morality, fairness, respect for elders and nature;
- d) Igbo Indigenous knowledge in the school curriculum, including evidence of the integration of Indigenous and Western knowledge, the power relations between them, and the ineffectiveness of environmental education instruction and education in general. This theme also includes the mother tongue, its importance

in the education of Indigenous children, and the impacts it has on the teaching and learning;

- e) Pedagogical implications of neglecting Indigenous knowledge and the Igbo language;
- f) Factoring locatedness in the preservation of Igbo Indigenous knowledge - This is in relation to how the location of Igbo (i.e., where they live) affects the regeneration or intergenerational transmission of Igbo Indigenous knowledge and language;
- g) The homeland view of the diaspora and the diaspora's perception of homeland people in relation to the preservation of Igbo Indigenous knowledge; and
- h) Suggested initiatives/practical ways to preserve Igbo Indigenous knowledge and language, including the challenges in doing so. For organizational convenience, I placed this in Chapter 7 – Concluding chapter.**

Valuation of Igbo Indigenous knowledge in contemporary Igbo society

In traditional Igbo society, Indigenous or traditional knowledge is synonymous with culture. The reason for this is that Indigenous knowledge is a product of culture, and, as Shava (2011, p. 2) aptly notes, Indigenous knowledge is “embedded in their culture and embodies their practices.” Indigenous knowledge in traditional Igbo society embodies the people's language, cultural practices, norms, values and beliefs reinforcing what has been already stated (Dei et al., 2002; Hoppers, 2001, 2002; Hountonji, 2002; Masuka van Damme and Neluvhalani, 2004; and Shava, 2011). However, particularly important in

Igbo traditional knowledge are morality, conduct and behaviour, as often stressed in the interviews.

I categorize Igbos into pessimists and optimists in terms of how they value their Indigenous knowledge. The cultural optimists are of the view that Igbos still value their Indigenous knowledge in contemporary Igbo society while the cultural pessimists generally think that Igbo do not value their Indigenous knowledge any longer. The opinions of these cultural pessimists are based on behavioural changes resulting from Western influences. For example, Ogbaku, a female participant, pointed out that some Igbo women wear pants and some men braid their hair. Because of this deviation from the cultural norms, she argues that it is an indicator that Igbo Indigenous ways are no longer valued. Again, cultural pessimists argue that the decline in morality and respect is a direct consequence of rejection of Igbo Indigenous knowledge. Their point is that the youths no longer listen to their elders. Another key point used by pessimists to substantiate their argument is the perceived importance of Western education over Igbo Indigenous knowledge. As Elder Amawom puts it, if one is educated in the Indigenous ways, that person is no longer relevant in the modern Igbo (or non-Igbo) society given the emphasis on Western education, which are not products of Indigenous knowledge. The cultural pessimists also argue that the social, material and political benefits accruing to individuals educated in Western education do not apply to individuals knowledgeable in Igbo Indigenous knowledge. Although these views are perhaps exaggerated, the pessimists view that young people no longer value Indigenous knowledge corroborates Keane's (2006) study where a Zulu elder makes a similar claim.

In contrast, cultural optimists argue that since *Ndi Igbo* continue to participate in cultural ceremonies/festivals, as witnessed in large turnout during new yam festivals and other cultural carnivals, this is an indication that the people still value their culture and traditions. A participant who is of this opinion argues that;

“No matter the level of Western education we have attained, we must not forget our roots. The community gathers to observe the New Yam Festival. It is usually done in August every year. People are continually involved in these practices, even some Igbos in Diaspora journey back to Igbo land during August for the New Yam Festival” (student 1).

Stressing his point further, this young individual argues that during *Oru Owere* – a cultural festival observed by Owere indigenes, a knowledgeable elder recounts the history/story of *Ekwemarugo*, which is a great way of passing the historical origin/culture to the younger generation. Thus, the most compelling argument advanced by the cultural optimists is that since the level of participation in cultural festivals still remains high, therefore, Igbos still value their Indigenous knowledge and culture.

A critical analysis of the foregoing shows that there is a generational clash. The older generation, mainly the cultural pessimists, accuse the younger ones of lacking interest and respect for Indigenous knowledge, while in contrast the youths, mostly the cultural optimists, believe that Indigenous knowledge is not devalued given the ongoing level of participation in cultural festivals. However, the young people contend that if there is any reason to believe that Indigenous knowledge is not valued by them, the older ones are rather to be blamed because they are not teaching them the Indigenous ways. Regardless of the perceptions of cultural pessimists or optimists, the impact of Western civilization and the problem of acculturation emerge in Indigenous knowledge research in a number of different contexts, for example, the Indigenous people in Oaxaca, Mexico

are continually experiencing acculturation in ways similar to the Igbo society in that their language and culture are not propagated through the school system. As a result, most of the Indigenous population there has been assimilated into the dominant Mexican culture (Ruiz-Mallen et al., 2009).

Western influences: Effects of capitalism, convenience of development, and media

Capitalism, it seems, is antithetical to the Igbo Indigenous ways. Indigenous Igbo knowledge is not about the maximization of profit, unlike Western capitalism that idolizes economic expansion and market triumphalism (McCarthy and Prudham, 2004). In traditional Igbo society, the economy is based on subsistence while sharing and the well-being of the community is more important than individual material progress. However, the way land and other resources are used in traditional Igbo society has changed. The challenges of figuring out ways to thrive in a Western capitalist world while at the same time adhering to the Indigenous ways, have contributed to most Igbos now shunning the Igbo Indigenous ways of life. Competition for the acquisition of wealth has become the main order of the society, and this has in various ways displaced those values that support taking responsibility for others' welfare and sharing available resources.

Clearly, Indigenous knowledge as presently perceived does not guarantee material progress, and for this reason, parents may not encourage their children to pursue Igbo Indigenous knowledge in a capitalist world. Nevertheless, this perception may not be entirely correct in view of the fact that over the last two decades, Indigenous knowledge has become an increasingly integral component of advancement in ecology,

health, and environmental sciences (Dei et al., 2000; Godbole-Chaudhuri, Srikantaiah, and van Fleet, 2008), and this could open many possibilities for Indigenous knowledge both materially and otherwise. Also, the World Bank and other global institutions have advocated for the use of Indigenous knowledge and resources in development practices and clearly articulate the importance of integrating Indigenous medicines into health care and infrastructure development (Godbole-Chaudhuri, Srikantaiah, and van Fleet, 2008). If global outfits are recognizing Indigenous knowledge, why are developing countries and, especially, Southeast Nigeria not taking advantage of it? Even though the Igbo Indigenous idea of resource use may not typically fit the dominant capitalist paradigm, I still believe that Indigenous communities can systematically harness their resources to produce reasonable living standards for themselves.

I do not want my argument in the preceding paragraph to be misconstrued as an adulation of capitalism; rather, I am only challenging the misconception that Igbo Indigenous knowledge cannot create material benefit for those who hold the knowledge. That said, I concur with authors who argue that the dominant neoliberal, capitalist ideology has presented enormous challenges to Indigenous sustainability (Godbole-Chaudhuri, Srikantaiah, and van Fleet, 2008). It is my view that capitalism has contributed immensely to the depletion of local Indigenous resources, as local Indigenous people no longer see their knowledge as useful in the present capitalist context. I thus subscribe to Polanyi's (2001) idea of re-embedding the market economy in society to avoid the destruction of local economies. In other words, I advocate capitalism with rich social values, in which community is respected, wealth is redistributed and the environment is protected. I believe that such an economic model would protect

Indigenous knowledge and prevent it from being overtaken by the dominant capitalist ideology, which conforms to Western knowledge systems.

By the same token, modernization as conceived through Western lenses has been implicated as a central cause of cultural erosion and the biggest threat to Igbo Indigenous knowledge preservation. In fact, almost every participant in this study, whether from the homeland or the diaspora, agrees that industrialization, liberal economy and the conveniences of Western development have impacted on the preservation of Igbo Indigenous knowledge. Arguing for the conveniences of Western development versus Indigenous knowledge preservation, a participant in this study who supports the preservation of Igbo Indigenous knowledge also recognizes that some cultural aspects are cumbersome, basing his view on the long process involved in preparing Indigenous local herbs/medications. Nevertheless, overall I argue that the principal reason why Indigenous people themselves are seeing their knowledge systems and ways of life as cumbersome is because of the very colonial mentality that privileged the Western system over Indigenous knowledge. Indigenous knowledge is viewed as unscientific and inferior in value to the epistemologies of the West. The colonial powers perceive these cultures as primitive and possibly less technologically advanced (Dei et al., 2000; Hoppers, 2001, 2002; Hountondji, 1997; Masuku van Damme and Neluvhalani, 2004; Shava, 2000, 2011).

Furthermore, the erasure of physical boundaries by the information economy (cable TV, internet and social media technology) has contributed to a greater exposure to Western ways of life, and this has impacted on the youth's interaction with the local culture. For instance, young people are now more exposed to music and movies coming

from the West than they are to local music. As one elder points out, most young Igbo, even while they have not left the shores of Africa, want to speak like Americans. They largely listen to American-styled pop and hip-hop music. Young musicians are no longer performing the Afro-juju and the high-life music popular in pre-independence Nigeria and the 1960s. That said, I must acknowledge that young Nigerian musicians have done a good job in localizing the American pop and rap music.

It is worth noting that Nollywood, the Nigerian movie industry, has played a great role in the marketing of Nigerian society to the world, especially Igbo society, because Igbos dominate in acting and production of the movies. Granted that Nollywood has helped to promote Nigerian culture (specifically the Igbo culture) to the outside world, the question remains: has Nollywood contributed significantly to the cultural preservation of Igbo Indigenous knowledge and culture? I would say “no”, given that Nollywood generally tends to mirror the cultural images and ethos of Westernized Nigeria with little effort to showcase Indigenous Igbo culture or values. In addition, most of the movies are not produced in the Igbo language and do not depict traditional Igbo villages and settings.⁹ Nollywood could have done better in the promotion and preservation of Igbo Indigenous knowledge had it based her movies on portraying traditional Igbo society in settings resembling real Igbo villages, with greater attention to the Igbo language and authentic cultural productions that reflect the Igbo collectivist culture. This is why I do not place much importance on Nollywood as a viable medium through which Igbo Indigenous knowledge could be regenerated in this dissertation.

⁹Some people might disagree that it is not always the case, as there are quite a few Nollywood films that are set in traditional Igbo village settings with some kind of morality or cultural tales. However, I argue that even the very few in traditional settings indirectly glamorize Western culture and worldviews.

However, in certain parts of Igbo land, especially around Owerri, I have witnessed a resurgence of a type of traditional music known as “bongo music”, which is somewhat different from the old African high-life music. Historically, African music has continued to metamorphose due to interactions with external influences, in what can be termed cultural re-creation, which is not peculiar to African performing arts. Every culture experiences this cultural re-creation. This goes to show that African culture is always changing and evolving and can never be static (Shava, 2011). But, if cultures are constantly evolving and being re-created, why bother resisting Western influences on Igbo Indigenous knowledge? As an Indigenous researcher, am I fighting to control what I cannot possibly control? While clearly these Western influences will persist, I think most Indigenous researchers that engage in this kind of research (endeavouring to preserve Indigenous knowledge) do so to keep the spirit, hopes and flames of Indigenous knowledge enduring and burning. I recognize that this interest is in itself a kind of postcolonial social movement that can shape socio-historical outcomes by promoting cultural preservation.

In Chapter 3, I also identified Christianity as a major Western influence that has impacted on the preservation of Igbo Indigenous knowledge. Christianity has crept into all facets of Igbo culture. Wedding, burial, marriage and other traditional ceremonies have incorporated aspects of Christianity. An elder in the study alluding to this change states that there are group of Christians who tend to shy away from cultural rituals and festivals such as the New Yam Festival, the *oru* festival and many others. He describes these types as “Christians who are more Catholic than the Pope.” According to him, they

believe that participating in cultural festivals and eating certain traditional foods is fetishism and un-Christian.

Igbo worldview and traditions

In spite of the view that Igbo Indigenous knowledge has declined as a result of some of the factors enumerated above, *Ndi Igbo* still believe that it is important to protect the core of their culture, values and identity. Culture is the custom and achievements of a particular people, and it is expressed in arts, artefacts, language, beliefs, morals, attitudes, behaviour, traditions and values (Omolewa, 2007). It is the basis of identity and significantly determines how people view reality. On the other hand, worldviews are cultural perception and the fundamental belief of a people. Worldviews make a culture unique and separate one culture from another. For this reason, Omolewa (2007, p. 600) states “culture functions as a lens of perception, influencing how people view themselves and their environment.” The Igbo have a set of worldviews that guide their relationship with each other and the non-human other (the rest of nature). Some important aspects of the Igbo worldview include justice, morality and fairness; respect for elders and nature; and placing of the community’s welfare over and above the welfare of an individual. Below, I briefly analyze some of these.

Justice, Morality and Fairness

Writing from the Yoruba perspective, Omelewa (2007, p. 601) notes that “young men and women are taught good morals and the resolve to flee from such crimes as theft,

adultery, use of foul languages and violence.” This demonstrates the importance a range of Nigerian cultures place on the abhorrence of practices defined as immoral.

Traditional Igbo society has many structures in place that regulate its members’ behaviour and conduct. Temporal or spiritual institutions, such as the village maidens (called *Umu Mgboto*), marrying into other towns while still involved in the welfare of their home villages, the village council (*Ama Ala*), the masquerades, and the ancestral spirits are used to normalize behaviours. These traditional institutions ensure that immoral behaviour and criminal activities are checked or curtailed. For instance, in most Igbo villages, especially closely related communities with close blood ties, people are bonded by an ancestral oath known as *umune*. *Umune* is a powerful invocation of ancestral spirits that ensures that morality, justice and fairness reign in a particular Igbo community. In some cases, neighbouring communities without blood ties may decide to swear an oath to strengthen their bonds. This helps to ensure peace, trust and unity between two communities. Essentially, the *umune* ancestral spirit binds kindred and communities of close bloodlines together. Traditionally, the *umune* ancestral spirits came down heavily upon immoral individuals who committed incest or adultery or stole a neighbour’s property or belongings, mistreated a widow or an orphan, lied or falsely accused a neighbour, and so on.

Below, I quote directly the statement of a participant to substantiate the place of *umune* ancestral spirit that helps regulate morality, fairness, and justice in a traditional Igbo society:

In Igbo land, we have *ofona* and *umune*, people are now committing all kinds of atrocities such as kidnapping, which didn’t exist before in Igbo land. In those days, when people committed a crime against a neighbour, they would be visited

by ‘*umune* ancestral spirits’ who killed people who indulged in such wicked acts (Mr. Nkwo).

‘*Ofo na ogu*’ implies the retributive justice of the *umune* ancestral spirits, which visits those who violate the moral and ethical codes of the community. I wonder why these temporal and spiritual justice mechanisms in traditional Igbo society seem to be less effective nowadays. Does it mean that *umune* ancestral spirits are asleep, or, alternatively, have they been driven away by civilization? No, the dominant view among the Igbo is simply that people have become contaminated, thus no one respects the spirits nor hears their silent voices any more.

Respect for Elders and Nature

Respect for elders is a cardinal rule in traditional Igbo society. There is an adage that says ‘respect elders in order to live long.’ Young people do not address an elder or people a few years older by their first names. They add titles or prefixes such as *nne*, *nna*, *dede* or *ndaa*, depending on the sex and age of the person being addressed. When problems such as land disputes arise in the village, the elders settle the problem. Children seek the wisdom of elders as life guides. Stressing the great deal of respect accorded to elders in traditional African cultures, Omolewa (2007, p. 601-602) writes:

In most African cultures, the elderly are accorded with a great deal of respect. African culture teaches that, to gain long life, to be wise, to be blessed and protected, one must respect not only the elders of one’s family but also those of the society. In general, older people are addressed using a title of respect and not by their ordinary name. A child is taught social courtesies. He/she learns how to greet with appropriate gestures, to show respect, to establish good relationships and to thank someone for a good deed.

This demonstrates that Africans, and in this particular context Igbos, respect elders because of their moral authority, and elders play a vital role in the organization and leadership of the village. Elders also play a very important role in the lifelong learning process of individuals in the community through cultural Indigenous environmental education.

Furthermore, in Igbo society, respect is also extended to nature and the rest of creation. There are many restrictions on resource use in Igbo land. For example, on certain market days, people are prohibited from cultivating their land, harvesting their crops or taking resources from the forest. In certain communities, hunting is prohibited in certain forests except during special annual festivals. The reason behind the restrictions is to cultivate respect for nature and for the sustainable use of resources. Most forests are owned as community commons, and resources are harvested collectively by members of the community.

Igbo Indigenous knowledge in the school curriculum

I begin my discussion in this subsection with a set of questions: Is there any evidence of the integration of Indigenous and Western knowledge in the school curriculum in Southeast Nigeria, and if so, what is the nature of this coexistence? How do instructional and pedagogical practices affect the teaching of Igbo Indigenous knowledge in a curriculum dominated by a Western worldview and approach to epistemology?

Based on the analysis of my data, there appears to be evidence of the coexistence of Igbo Indigenous knowledge and Western knowledge in the existing school curriculum; however the extent and nature of the coexistence of these epistemological approaches

seem to be uncoordinated. Generally speaking, most of the participants in the study support the notion of epistemological integration. It is important to note that within the larger scope of literature on this issue, there appears to be opponents and proponents of the concept of integration.

Prominent supporters of integration include Snively and Corsiglia (2001), who for the most part believe that Indigenous knowledge offers vital knowledge that Western knowledge can learn from, as Indigenous knowledge frequently reflects a deep, holistic understanding of nature. Meanwhile, Corbern and Loving (2000, 2007), opponents of the concept, argue that Indigenous knowledge will fare better if it stands alone as a separate domain of knowledge. The key argument against complementary epistemology is that Indigenous knowledge will be drowned in the resulting epistemic relationship. I used to think along these lines prior to undertaking this research. In fact, and quite to the contrary, the key to the survival of Igbo Indigenous knowledge is in the integration of all or the most important aspects of Igbo Indigenous knowledge into the current school curriculum, which is a curriculum largely based on Western knowledge. There is overwhelming evidence that the Igbo Indigenous knowledge that still remains resides in Igbo villages and rural communities, and these knowledges are largely undocumented. Those that possess this knowledge are dwindling in the villages, resulting in a generational gap. In addition, the younger generation are migrating out of the villages into urban centres, thus with less opportunity to learn acquire Indigenous knowledge. Consequently, the best hope for the survival of Igbo Indigenous knowledge is for it to be fully integrated into the school curriculum.

For this reason, Western-style education should be re-thought to promote Indigenous knowledge. Again, the preservation of Igbo Indigenous knowledge cannot be the responsibility of the villages and communities in which Indigenous knowledge currently resides; it has to be channelled through the mainstream educational system through Igbo language pedagogy. Unfortunately, evidence garnered from the data indicates that there is no adequate plan in Southeast Nigeria to provide education that is culturally in tune with Igbo Indigenous mode of thought. Granted there are little bits of epistemological coexistence between Igbo traditional knowledge and Western knowledge, as can be seen from the direct statements of some teacher participants quoted in the earlier section; undoubtedly, there is a melange of Igbo and Western knowledge that coexist in the social and cultural milieu of the people, however, current education and schooling in Igbo land is largely a Western knowledge-based curriculum.

As stated earlier, I must emphasize that in recent times, some concerned individuals (such as Bishop Obinna), Igbo socio-cultural organizations (such as Ohanaeze Ndi Igbo, the leading Igbo socio-cultural organization); Igbo intellectuals, (such as those who have delivered the Ahiajoku Lecture,¹⁰ including Professors Echeruo (1979), Okigbo (1980), Afigbo (1981), Anya (1982), Nwoga (1984), Nwabueze (1985) among many others,) have been calling for the inclusion of Igbo Indigenous knowledge and culture in the school curriculum. As a next step, education policy must ensure that an Igbo

¹⁰ The Ahiajoku Lecture was initiated by Chief Sam Onunaka Mbakwe, a revered Igbo leader and a former executive governor of old Imo State. The Ahiajoku Lecture was inaugurated in 1979 in order to reawaken the *Ndi Igbo*'s consciousness about its proud cultural heritage. Professor Echeruo commenced the Lecture Series with a lecture titled "A matter of identity – Ahamefulè", meaning "may the Igbo heritage and identity never be erased from history". The Ahiajoku Lecture has provided a platform for Igbo intellectuals to promote awareness about the importance of resurrecting Igbo Indigenous knowledge, culture and heritage. Following Echeruo's landmark inaugural lecture, other prominent Igbo academics and scholars have explored Igbo culture, civilization and heritage from the perspectives and lenses of their various academic disciplines.

Indigenous knowledge curriculum document is laid out for every subject in a comprehensive manner, so as to provide opportunities for dialogue and interaction between the two knowledge systems. As long as this remains lacking, integration will be inadequate.

It is important to recognize that the mode of transmission of Igbo Indigenous knowledge through oral tradition, which worked in the past, is now deficient because parents (deemed as first teachers of their children) are no longer capable of bearing the burden of Indigenous knowledge transmission. Most adults are not acquainted with Igbo Indigenous knowledge, let alone have the capacity to transfer it to their children. Some might argue that even if Igbo Indigenous knowledge is well entrenched in the Western-dominated curriculum, if Indigenous students do not see the relevance of their traditional knowledge in today's mainstream Western culture, they still might not be interested in it. Others might equally ask what is the point of learning something that would not be useful in the real world? I believe that it is important to provide young Igbo students with the opportunity to learn their Indigenous knowledge in the school, regardless of whether the knowledge will be useful or not, as clearly our selection of subjects in the Western curriculum is not based on perceived student interest but rather on the socially constituted importance of certain knowledge. If we make the integration meaningful, so that all levels of schooling incorporate Igbo Indigenous knowledge and language in an experiential manner, learning will be made relevant and many Indigenous students will begin to relate more to the concepts taught at school because they will be drawing on their rich cultural experiences.

In the context of integration of Indigenous knowledge into the school curriculum and giving education a multicultural perspective, South Africa's National Research foundation calls for the development and inclusion of Indigenous knowledge in education, advising that such initiatives should be championed by academics. The institution states that "education must not be simply an assimilation of Western values, but must also be directed towards the strengthening of Indigenous culture" (Mboya 1999, p. ix, cited in Keane 2008, p. 588).

However, Le Grange (2007, p. 581) recognizes the potential effect of *cognitive dissonance* that results when African children are exposed to African and Western worldviews.

For non-Western learners, interaction between two worldviews characterizes much of their school experience, complicating the learning process and potentially resulting in cognitive conflict or as the literature describes it, cognitive dissonance/perturbation. In Africa, schools are the sites where most learners first experience the interaction between Africa and Western worldviews. It is therefore crucial that teachers working in these contexts be aware of this interaction and understands the way it could complicate the learning process.

To mitigate the so-called 'cognitive conflict' as Le Grange (2007) indicates above, it is important both for Indigenous children to start their education in the culture and language they are most familiar with at the formative stages of their schooling, and also require teachers of Indigenous students to draw on the rich cultural experiences of Indigenous students. Accordingly, I turn to a discussion regarding the use of the mother tongue, which is a crucial factor in the preservation of Igbo Indigenous knowledge.

Pedagogical implications of relegating Igbo language

I begin this discussion by pointing out that until recently, the use of the Igbo language by pupils in the classroom has been largely prohibited by most teachers, except during a regular 30-45 minute period allotted to Igbo language in the curriculum. Teachers either punish or caution students who use it in their classrooms. Some teachers and students interviewed in this study refer to Igbo language as vernacular, which reflects the colonial way of relegating and subjugating native languages. The discrimination against the Igbo language in the school system is rooted in the British missionary education. As Dei Ofori-Attah (2006, p. 414) observes, “the curriculum the British and the Missionary educational planners implemented did not include any local topics or languages, and the main reason they put forward was that there were no written records of any West African language or history.” Thus, the British/missionary curriculum stressed the type of education that would prepare Africans to speak English, so as to become clerks, teachers, missionaries, or law enforcement officers in the British West African colonies in order to avail the colonial establishment with cheap semi-skilled labour (Rado, 1972; Ocholla, 2007; Ofori-Attah, 2006). The irony of this educative approach is that the marginalization of Igbo language still continues several decades after independence.

Although Igbo language has been linked to the preservation of Igbo Indigenous knowledge and culture, this has not translated into a greater use of the Igbo language in schools. There is an increasing trend in Southeast Nigeria for the middle class and the wealthy to send their children to private institutions instead of the government-funded public schools. The reasons are obvious: the public schools are in shambles and those who can afford private schools see it as a better alternative. Thus, class differences are

deepened. But the problem with most of the private schools is that they do not encourage the speaking of Igbo language, rather English, French and German are emphasized over the Igbo language. These foreign languages are prioritized because some misguided parents believe that when their children speak little or no Igbo it elevates their social status.

Arguing in support of mother tongue in pedagogy, Mr. Oha asserts that “80 percent of what I know today, I acquired from Igbo Indigenous knowledge expressed in my mother tongue, such as learning how to talk, environmental cleaning/sanitation, farming skills like planting, harvesting, and preservation, and reading people’s countenance at any particular time. If I do not have the mother tongue how would I be able to know all these?” He also contends that in the 1960s, 1970s, and up to the 1980s, academic achievement was much higher than what it is now in public schools because Indigenous students were still drawing on their cultural languages and experiences, noting that with the increasing inflow of Western influences, Indigenous students hardly draw on their cultural experiences. However, I think the point that should not be overlooked in relation to poor achievement in school presently is the decaying and dilapidated educational infrastructure. These are also factors that have contributed to poor education achievements.

In other words, Mr. Oha’s arguments above corroborate the point of view of some Indigenous writers that Indigenous students learn better when appropriate culturally-based pedagogical approaches and models are applied (Cajete, 1995; Kawagley and Barnhardt, 1999; Shizha, 2007). Hence, the preservation of Indigenous knowledge, culture and identity is strongly linked to the Indigenous languages (McKinley, 2005;

Shizha, 2007). In order to fully understand the effects of neglecting mother tongue, it is important to examine it alongside the pedagogical implications of relegating Igbo language instruction.

Battiste and Henderson (2000, p. 12) view the exclusion of Indigenous languages in schooling in Africa as a form of “cognitive imperialism.” What else could it be when teachers educated in the colonial mentality prevent Indigenous students from using their Indigenous languages in their own classroom in their native land? Furthermore, McKinley (2005), arguing in the context of mother tongue pedagogy, asserts that when Indigenous languages are incorporated into the school curriculum, they enhance students’ understanding of principles and concepts. Shizha (2007, p. 307) corroborates this notion by stating that the language of instruction in African schools is the major setback to students’ “cognitive development and learning outcomes.”

Based on a longitudinal study carried out in Nigeria, Bamgbose (1984) concludes that children taught in their mother tongue perform significantly better in all subjects than those taught in English. That is, when cultural contexts are applied in the teaching, Indigenous students tend to understand better. Similarly, some teachers in my study reported that they intermittently switch from English to Igbo when teaching some concepts, arguing that the use of the Igbo language makes the concepts more meaningful and culturally authentic to the students. Equally in support of this view are writers such as Clark and Ramahlape (1999), Dzama and Osborne (1999) and Shumba (1999), who similarly observe that teaching and learning of science in school is not successful because the language of instruction alienates Indigenous students, coupled with the fact that

instruction and learning experiences are not linked to everyday life experiences or the cultural context of Indigenous students.

To mitigate this problem, Dei (2002, p. 175) suggests the use of both languages (Western and Indigenous language, in this case Igbo), which he describes as “language integration” and “an educational inclusive practice.” Strengthening this notion further, Shizha (2007, p. 308) states that “a student whose mother language has not been used in science discourse has added difficulties of cognition and understanding.” In fact, it does not have to be only in science, as that also applies to social studies, English language and most other curricular areas.

Also furthering the argument that the mother tongue is crucial for learning, especially during the formative stages, MacKenzie (2009, p. 369) states that:

...an education which begins in the mother tongue and builds competence in the second language before using it as the medium of instruction, thus reducing the linguistic and cultural barriers faced by students when entering school, is a key component in increasing the educational attainment of speakers of minority languages.

Perhaps, the deficiency in the educational system in Igbo land is a result of education conducted in foreign languages other than the children’s native language, i.e., outside the children’s cultural context. In view of this, Mackenzie (2009, p. 369) argues that teaching methods and textbooks that are often used “bear little relationship to the reality of the tribal children’s lives.”

However, it appears that teachers are recognizing the importance of mother tongue pedagogy, as evidenced in Ada’s statement:

our curriculum says we must use English and Igbo. After speaking in English you have to repeat it in Igbo for the child to really understand,

because the target is the child, if the child didn't get it, your effort is useless. So you must do everything possible to make the child understand the topic— by visual, drawing, and by presenting it in English and Igbo.

Given these points, it is safe to argue that when creative and resourceful teachers conduct instruction in the mother tongue and it is culturally-based, they produce a better result, and not only that, it makes education holistic. Research supports this approach. To demonstrate the importance of **complementary epistemology**, I refer you to Appendix A, which presents statements of some of the participants, with examples of complementary pedagogy in their classrooms. Finally, I now present the last theme in analysis.

Locatedness and the preservation of Igbo Indigenous knowledge and language

Right from the conception of this research idea, I have been intrigued by how locatedness, or where Igbos live, influences their consciousness, identity and the intergenerational preservation of Igbo Indigenous knowledge, culture and language. Moreover, as an Igbo living in the diaspora, issues such as losing the Igbo language and Indigenous knowledge and the politics in the homeland tend to dominate discussions when Igbo men and women gather. As a result of the dispersal of the Igbos, Igbo people have devised two categories of Igbos: *Igbo nu uzo ije* (the diasporic Igbo) and *Igbo nu ulo* (the homeland Igbo). These two distinct categories describe “locatedness” and the migratory trajectory of the Igbo. I want to quickly note that there are also Igbo who live in Nigeria but outside of Igbo land, in Yoruba land and the northern part of the country. This group is also encumbered by the cultural and language dilemma affecting the Igbo

diasporic communities in the United States, Canada and Britain, as well as elsewhere in Europe and in other parts of the world.

Not all Igbos living in the diaspora are sensitive to the language and cultural dilemma that they and their children face. As a matter of fact, Igbo cultural sensitivity, awareness, and identity vary among Igbos in the diaspora, as well as among Igbos in the homeland. Some are highly sensitive towards these issues, while others are completely indifferent. I learnt this through my interaction with Igbos in Toronto. This can be illustrated with a personal experience.

A few years of ago, I was with a group of men (in their thirties and forties), and we were discussing the challenges of preserving and/or losing the Igbo language and cultural heritage, especially for the children of those of us in diaspora. One of the men replied sarcastically, “if you are bothered by that, you shouldn’t have left Igbo land.” The sarcasm in his voice quickly gave way to frustration, and I knew that he meant every word he was saying. I also noticed anger in his voice when he said,

Our age group is the *wasted generation*. What could Nigeria possibly offer me? After university, I spent so many years without a job. Especially if you are an Igbo, it makes the situation worse, so I managed to escape from that hopelessness to Canada. Do you think it will bother me if my children lose our language and cultural heritage? No.

This is not the place to get into the politics of Nigeria, especially how young Igbo feel politically and economically marginalized in Nigeria, but I understand that this man’s lack of interest in the Igbo cultural heritage may be a result of his presumed marginalization by the Nigerian state. Correspondingly, an elder participant in this research referred to diasporic Igbos as a “*lost generation*” similar to a *wasted generation* used in describing Igbos in diaspora. Thus, so far, the evidence from the data suggests

that where Igbos are located to a large extent affects the preservation of their cultural heritage, including Indigenous knowledge and Igbo language.

In order to deepen the analysis of Igbo dispersion in relation to the preservation of Igbo cultural heritage, I link it to the context of the Nigeria-Biafra civil war (1967 to 1970), which provides an insight as to why dispersion of Igbos increased following the end of the war. Before this civil war, the Igbos' significant influence in Nigeria's political and economic structures was unquestionable. I shall not delve into the politics and history of the war here, but it is well known that the massacre of the Igbos carried out by the Nigerian state led to the extermination of about 1 million Igbos and the massacre of Igbos in Northern Nigeria continues today. At the end of the Nigerian-Biafra War in 1970, Gowon, the Nigeria military head of state at that time, famously declared "no victor, no vanquished," yet the policy of Nigeria has continued to marginalize and exclude Igbos from access to resources and political leadership. Jibrin (2000) states that ethnic groups in the Nigerian state may feel marginalized if their rights to state resources and political leadership are denied. This is very much the case for the Igbos. Right after the war, even though the slogan of the government at that time was "no victor, no vanquished," the Nigerian state hideously and surreptitiously pursued its policy of marginalization against the Igbos. A striking example of this injustice and marginalization is that after the war, those Igbos with money in financial institutions were given only twenty pounds no matter how much they had in the bank. Igbo properties in other parts of the country, notably Port Harcourt and Lagos, were declared abandoned. To further marginalize Igbos, the Igbo speaking territories were politically and geographically drafted into other geopolitical zones in Nigeria. This re-drawing and manipulation of regional territories is a systematic

political calculation to remove oil-producing areas from Igbo land. The Igbos were thus marginalized in the distribution and allocation of resources and even more so in access to political leadership.

Although the Igbos were the most dispersed people in Nigeria even prior to the Nigerian Civil War (Ojukwu, 2009), migration from Igbo land to other parts of Nigeria in the north and southwest intensified following the end of the civil war because of the inadequate allocation of resources to Igbo regions. This also created concerns about the Igbo language for parents whose children were now growing up in these areas.

It is worth noting that Igbos living in the northern part of the country (especially in the *Sabon Gari*, Hausa slang for dwelling for strangers) are often targeted as culturally Igbo whenever there is political turmoil. The Muslim fundamentalists target Igbos and their property at every opportunity. Because of the persecution of Igbos in the Nigerian state and the general lack of economic opportunities available to Igbo youth compared to youth from other ethnic groups, a good number of Igbo youth do not feel committed to the Nigerian state. Agitation for a separate state and self-determination is thus very strong amongst Igbo youth. Perhaps frustration towards the Nigerian state may also have impacted Igbo youth's cultural identity, as exemplified by the man's indifference towards Igbo cultural heritage.

While the analysis above has helped us gain an insight into Igbo dispersal, moving further from there I argue that one's predisposition to be sensitive or indifferent to Igbo cultural heritage, for the most part, is dependent on an individual's level of consciousness, and this is regardless of the locatedness of the individual. My reason for taking this stand is based on the evidence from the data, which demonstrates that some

homeland Igbo, just as well as some diasporic Igbo, may show indifference to preservation of Igbo Indigenous knowledge, language and cultural heritage, therefore, location has minimal impact on sensitivity or consciousness of Igbo Indigenous knowledge, language and cultural preservation. That said, I recognize that diasporic Igbos may show more pronounced signs of cultural dilemma and deficiencies due to immersion into a different Western-oriented culture.

Accordingly, I link this discussion back to existing literature on the African diaspora, to see if there is evidence of cultural preservation within that diaspora. There are arguments that cultural preservation actually does occur in diasporic settings in the United States. Prominent in advancing this argument is Hildebrand (2006), who argues that Igbo cultural stories transmitted via enslaved Igbos in the United States through transatlantic slavery are reflected in the folklore or wisdom of their descendants in the 20th century, demonstrating that Igbo culture left a lasting impact on the culture of African Americans in certain regions of that country. Hildebrand (2006) bases her analysis on a collection of African American folktales, such as “The King Buzzard,” “The Yellow Crane,” “Transmigration,” and “Ole Man Rouse.” She argues that there are significant elements of Igbo belief systems and cosmology present in these folktales, such as the concept of reincarnation and the transmigration of the soul from human to animal or even plant if an individual led a very sinful life unworthy of a human soul. However, I must point out that these beliefs are not unique to members of the Igbo ethnic group; many other African groups also hold such beliefs.

Indeed, from a more convincing point of view, Hildebrand (2006) argues that what may have happened was a “mix” of tales from Igbo-descended people and other

Africans of various ethnic backgrounds, thus, demonstrating that “syncretism” actually took place in the United States. Syncretism refers to the change that occurs over time as cultures blend together (Hildebrand, 2006). This latter position makes sense to me, as many ethnic groups in Africa – be they Manding, Bambara, Agni, Yoruba, the list is endless – were influenced by this violent encounter, the transatlantic slave trade.

Prior to Hildebrand’s (2006) argument concerning the survival of the culture of enslaved Africans in the New World, in the period before 1980s anthropologists and historians failed to find evidence of such survival. The following statement by Roger Bastide (1967, p. 7) illustrates this perfectly:

We find that there is hardly a single African tribe that failed to provide a contingent for the New World.... yet Negroes, for the most part, have left no surviving trace of their original native culture.

Bastide’s (1967) view perhaps may explain the reason why Igbo diaspora in Toronto, especially the second generation might have challenges with respect to the preservation and retention of the Igbo language and culture in the diasporic space. My opinion is informed by personal encounters and experiences within the Igbo community. As pointed out before, Igbo children whose parents are immigrants, including my children, are experiencing linguistic and cultural dilemmas (Obi, 2010), and most are unable to speak the Igbo language and identify with their cultural heritage, even though their parents continually attempt to recreate and uphold certain socio-cultural institutions that define their *Igboness* in the diaspora (Mbabu, 1989). These cultural norms and values are recreated in the diaspora through membership in ethnic cultural organizations, and the cultural organizations also serve as a forum for social integration (Reynold, 2004),

thereby replicating social settings from their ancestral Igbo homeland. The main purpose of these cultural associations is to preserve Igbo cultural values in the diaspora.

Undoubtedly, first generation immigrants from Africa often draw on their homeland culture to shape their identities in the new diasporic space, in line with Baffoe and Asimeng-Boahene's (2013, p. 2) statement that "you can take an African out of Africa, but you can never take Africa out of an African." But can this be said of second and third generation Igbos, and more broadly, other African immigrants? Why do they not retain their cultural heritage? I do think that the possibility of cultural assimilation is the ultimate price we have to pay for blatantly pursuing Western civilization and its material wealth.

In order to balance the discourse of the effect of dispersal/migration in the preservation of culture, I now briefly examine the experience of Asian diaspora (with particular reference to Sikh Punjabi living in Brampton, Ontario) to compare how their experience differs or is similar to Igbo (or African) diaspora.

It appears that the Asian diaspora, particularly the Indian diaspora that I comparatively explore in this analysis is also concerned about the challenges of preserving their cultural heritage, mainly language, in a same way as Africans. Writing about the South Asian diaspora, Shukla (2001, p. 553) observes that "as people from South Asian countries move around the world, they carry a repertoire of images and experiences from the past... in new places of settlement." The carrying of artefacts and cultural images from the homeland to the new settlement is not only associated with Asian immigrants, as that to some extent can be said of African immigrants, especially the first generation immigrants. Shukla (2001) cites an example from Trinidad and

Guyana, where there has been a persistent Indian or Hindu culture, especially in religious, kinship, culinary, musical, and other socio-cultural traditions, in spite of the incredible diversity and blend apparent in these Caribbean countries. Most amazing is how Hindu devotional songs in Trinidad connect to their counterparts in India, despite more than 150 years in the diaspora (Shukla, 2001). Furthermore, Shukla (2001) points out the persistence of Punjabi cultural traditions in the North American landscape can be attributed to the desire of a second generation Punjabi American to identify as Indian.

Equally interesting is Rangaswamy's (2005) view that the cultural survival in indentured Asian labour that emigrated to most of the Caribbean between 1834 and 1917, which now constitutes much of the Asian diaspora in the Caribbean, is greater than that of the African diaspora resulting from the transatlantic slave trade in the United States, the Caribbean and elsewhere. This can also be said of the contemporary or postcolonial Asian diaspora in comparison with its African counterparts.

Also recognizing the tremendous cultural survival of Indians, Mahmood (2011) observes from fieldwork among Sikh subjects living in North America that the geography and culture of Sikh communities in Canada and the United States seems to be reproduced or replicated from their ancestral India. Similarly, Rangaswamy (2005, p. 289), while studying Indians in different diasporic areas, notes, "whether in Surinam or the Netherlands, Indians keep their culture alive and speak a mixture of Bhojpuri, Creole and Dutch called Sarnami or 'Surinami Hindi.'" Furthermore, he points out that although the multiethnic and multilingual Mauritius society independently coexist in relative harmony, Indians tenaciously cling to their religion, language, customs, and traditions as much as they can. Furthermore, Rangaswamy (2005, p. 293) opines that South Asians in Britain

resist “cultural homogenization” by importing entire Sikh and Gujarati villages into England, which helps them maintain their marriage traditions, religion, and social lives as if they are in their native India. The Indian diaspora’s devotion or adherence to its religious and cultural identity and the politics of the homeland, even for several generations following migration, is compelling evidence that their culture endures more than that of diasporic Africans.

Why, then, do diasporic Asian cultures survive or endure for several generations more than, say, an African culture in the diaspora? In trying to answer this question, I speak from the context of an African immigrant in the diaspora. I argue that religious affinity is fundamental to diasporic cultural survival. Indians, be they Punjabi Sikh or Hindu migrate to the diaspora with strong ties to their ancestral or homeland spirituality. This identity, based on spirituality as well as on language, provides a forum through which migrants maintain their culture and traditions within the diasporic space. Indians thus have an advantage over diasporic Africans with respect to their cultural survival and preservation in the diaspora. Africans on the other hand, migrate to the diaspora (notably to the West) with fewer dispositions to practice their traditional African spirituality due to the colonial supplanting of their traditional religion with Christianity. It is not that South Asia was not also colonized, but the reality is that their ancestral spirituality remained almost intact despite their encounter with European colonialism. Thus, when the Africans migrate to the West, they are easily absorbed into the mainstream host society, where the dominant religion is also Christianity. As previously acknowledged, first generation Africans carry their cultural artefacts and language with them into their new society, however, these cultural artefacts are expressed outside the context of traditional African

spirituality, and they perhaps lack the capacity to ensure intergenerational cultural survival.

Another reason why cultural survival has endured in diasporic Indian communities is that at an early age, Indian children spend time with their grandparents, who teach them in their native languages. Some Igbo children have had some achievements in this direction with their grandparents, but the results do not compare with Indian communities in Canada. Given these points, I argue that the unique colonial experience seen in each of India and Nigeria, perhaps contribute to why South Asians preserve their language and cultural heritage in their diasporic locations.

In the final analysis, I am stressing that proximity to the homeland makes a great difference, though this does not diminish the fact that homeland Igbos are also affected by the decline of the Igbo language and Indigenous knowledge. Thus, to encourage the preservation of Igbo Indigenous knowledge and language in the homeland and in the diaspora locations, I advocate place-based environmental education, where Igbo students can experience their local environment and through this experiential encounter, they acquire the language and knowledge associated with the local environment. In view of the fact that diaspora children are removed from the local Igbo environment and immersed in the Westernised environment, I have more questions than answers as per how place-based cultural environmental education can possibly help them preserve their Igbo language and cultural knowledge. This further cements the argument that homeland Igbos could be more predisposed, or better able, to preserve Igbo language and Indigenous knowledge than the diasporic Igbos if the homeland Igbos conscientiously embark on this initiative.

Chapter Seven

Conclusion

This study was set out to explore the decline of Igbo Indigenous knowledge in southeast Nigeria, and the possibilities for Indigenous environmental education to regenerate Igbo Indigenous knowledge and language. In order to gain a nuanced understanding of this complex phenomenon, this research focuses on both homeland Igbo based in Nigeria and diasporic Igbo in Toronto. The location where the Igbos live is an important factor in this study because the study also seeks to know whether locatedness of the Igbos affect the preservation and trans-generational/inter-generational transfer of their Indigenous knowledge, language and culture. The study first examined the reason why Igbo Indigenous knowledge is declining and whether Igbos still value their Indigenous knowledge and language. I then considered whether location (i.e., where Igbo are living) has an effect in the decline, preservation as well as the generational transfer of Igbo Indigenous knowledge. Finally, I analysed the possibility of using a culturally based Indigenous environmental education in Igbo language instruction to revamp Igbo Indigenous knowledge.

The evidence from the previous chapter provides insights in the examination of these trends. In regards to the decline of Igbo Indigenous knowledge, the findings of the study suggests that Igbo Indigenous knowledge is perceived as ‘low status’ knowledge since it does not attract material benefits as much as Western worldviews. Other factors contributing to the decline of Igbo Indigenous knowledge are the pervasive influence of Western culture via the media systems and the conveniences of Western development. In this regard, Igbo IK is perceived as ‘cumbersome’ unlike Western development that

generally makes living more convenient. As a result of the ‘low status’ perception of Igbo Indigenous knowledge, the latter is not valued in view of its little material benefits in a capitalist economy. However, there are some well-grounded Igbos who are still interested in Igbo traditional ways of life but the size of this group will continue to decline if concerted effort is not made to encourage Igbo Indigenous knowledge. The decline in Igbo Indigenous knowledge consequently had a negative impact on Igbo language since Igbo language is the cultural vehicle through Igbo Indigenous knowledge is propagated and transmitted from generation to generation.

In order to change the ‘low status’ perception of Igbo Indigenous knowledge in an emerging Igbo capitalist society, the idea of studying Igbo as a single honour discipline should be discouraged. I suggest that Igbo Indigenous knowledge and language should be studied in the universities as an interdisciplinary program. For example, if one is majoring in Igbo studies, that person could also take minor in banking, information technology or any other course that is readily employable and relevant in a typical capitalist economic society, as the case of Igbo land and Nigeria in general. On the other hand, those majoring in the so-called lucrative courses would have Igbo studies as a minor. This could elevate the status of Igbo Indigenous knowledge and language. However, the success of this initiative depends on government policy.

Equally in line with the valuation of Igbo Indigenous knowledge and language, the findings in the study reveal rather surprisingly that young people, if given opportunity to study or learn Igbo Indigenous knowledge and language, might be well interested in them, contrary to the earlier held notion that they are not interested in Igbo Indigenous knowledge. According to the study, young Igbos are bombarded with Western influences,

however, with the necessary redirection, parental support and policy change, young Igbos can show positive interest in Igbo Indigenous knowledge and Igbo language instruction.

Another surprising dimension of the finding is that core proponents of Igbo Indigenous knowledge do not necessarily support all aspects of Igbo traditional practices. For example, preparation of aspects of Igbo traditional medicines involve procedures regarded as cumbersome. Also culturally discriminatory practices such as *osu*, and especially those that seem to discriminate against women on inheritance rights, operate as regressive traditions.

Secondly, in the context of whether locatedness affects Igbo Indigenous knowledge and language, the findings suggests that locatedness, i.e. where Igbos are living geographically, does not necessarily affect one's consciousness regarding Igbo Indigenous knowledge and language. It is, however, important to recognize that diasporic communities are encumbered by pressures associated with living in Western society that could potentially impact on their readiness to acquire and transmit Igbo Indigenous knowledge and language. However, that does not mean that homeland communities are not burdened by their own problems, such as a lack of insightful and purposeful governance, coupled with misplacement of priorities. All things considered, the homeland Igbos are likely more predisposed to preserve Igbo Indigenous knowledge and language as well as to enhance inter-generational transfer of Igbo cultural heritage because of their cultural location. This claim suggests that place-based education or land education will be more effective in the homeland than in the diaspora given that diasporic Igbos may not have the opportunity to be pedagogically acquainted to their place (homeland) through a place-based culturally relevant environmental education. Thus, the

Diasporas' acquisition and transmission of Igbo Indigenous knowledge and Igbo language via place-based education is further hampered and complicated by the westernised environment in which they are immersed.

For a more nuanced understanding of the implications of locatedness in relation to the preservation of Igbo Indigenous knowledge and language, a comparative analysis of Igbo experience in diaspora and the Southeast Asian Diaspora was made to factor the extent to which locatedness affects these two diasporic experiences. Findings suggest that although Southeast Asian diasporic communities in North America and Europe face their problems and challenges with respect to preservation of their cultural heritage while in diaspora, they nonetheless have been able to carry their Indigenous knowledge and cultural heritage/language to lands in which they migrate (Shukla, 2001; Mahmood, 2011; Rangaswamy, 2005). Be that as it may, that cannot be said of the diasporic Igbos as they experience a more significant culture and language dilemma when compared with their Southeast Asian counterparts. This is due to colonial policy in most of Africa that is assimilatory leading to the erasure of traditional and religious institution, especially in Igbo land.

Finally, my research findings suggest that using a culturally-based Indigenous environmental education in Igbo language instruction presents possibilities for revamping and preserving Igbo Indigenous knowledge. The importance of a culturally-based Indigenous environmental education rooted in Igbo language instruction cannot be over emphasized in the preservation of Igbo Indigenous language. For instance, evidence suggests that when teachers draw on Indigenous students' cultural background and language, learning is more relevant and understanding of specific subject areas are made

much easier (Kawagley and Banhardt, 1998; Bartlett, Marshall and Marshall, 2012; Ritchie, 2012; Ochalla, 2007). This is not related to environmental education only but is also true for science education and indeed all aspects of education. For instance, a research participant, who is a teacher in a rural secondary school, narrated his experience when he was teaching ‘preservation of food.’ According to the teacher, when the students did not understand the concept very well at the beginning, he mentioned some food preservation techniques used in the villages (such as the traditional *ngiga*¹¹) and students unanimously echoed “aha, we now understand what you are talking.” Similar instances abound in the narratives of the participants. These views demonstrate that culturally-based environmental education pedagogy is more relevant and beneficial to Indigenous students.

Also consistent with the above, Indigenous Igbo students learn most academic subjects or concepts when pedagogical practices encourage complementary epistemology, in which Igbo Indigenous knowledge and Western knowledge are creatively synergized in a familiar language that builds understanding. For this reason, teachers in Igbo land will have to embrace methodological and pedagogical practices that encourage creative complementary ideas, as evidenced in this study. However, if teachers are lacking the initiative or not trained on how to creatively blend the knowledge systems, the desired learning goals will not be achieved.

Additional findings emerged as crucial in this research. First, contrary to the assumption that Western knowledge system will eclipse Indigenous knowledge if they are integrated (Cobern and Loving, 2008), Igbo people themselves think that the most viable

¹¹ *Ngiga* is a metal cage preservation device hung over fire to preserve meat, fish and other food products..

way for their Indigenous knowledge to thrive and to survive is if it is integrated within the mainstream school curriculum. The reason being that Igbo Indigenous knowledge outside of the school curriculum can no longer be effectively transferred to the younger generation because the traditional modes or institutions that ensure the transfer of Igbo Indigenous knowledge have declined or have lost their capacity of transmission. First of all, there are only a few custodians of this knowledge in the villages and communities, and social institutions such as age-grades and masquerades have lost their ability to play an important role in the society. Thus, to ensure the continued existence of Igbo Indigenous knowledge, it must be integrated into the mainstream curriculum as education is the cultural vehicle through which knowledge is reproduced, propagated or transferred from one generation to the other. That said, pedagogical steps could be taken to avoid a hegemonic relationship in which Western knowledge continues to dominate or eclipse Igbo Indigenous knowledge. An awareness of this dissonance or tension in the epistemological relationship will help (Indigenous) students interrogate the power relationship that exists in these epistemic systems, and understand how Western knowledge is privileged and undermines Indigenous knowledge.

Secondly, another important finding that emerged in this study - even though my research questions did not address directly - is that capitalism or economic liberalism, whether in the past or present form, has impacted on the socio-cultural and ecological wellbeing of Indigenous Igbo society. The pursuit of material wealth in modern Igbo society has resulted in greed. Greed has impacted on various aspects of Igbo Indigenous knowledge, for instance, Igbo traditional medicine is encumbered by malpractices due to greed and corruption. Unskilled people, without knowledge of the practice, have helped

in reducing the confidence which people previously held in the system. In addition, many have resorted to crime as a means of getting quick wealth, as can be seen in kidnapping, violent robbery, and ritual killings. Moreover, capitalism has also impacted on land use and resource exploitation, thus, resulting in the decline in species diversity and widespread environmental problems. Equally disturbing is the reality that many young people and their parents shun the pursuit of Igbo Indigenous knowledge/language in higher education, as they question the usefulness of Igbo traditional knowledge/language in the present capitalist economic dispensation.

The theoretical perspectives that informed this work need to be further revisited in order to understand the theoretical implications of this research in respect to what has contributed to the decline of Igbo Indigenous knowledge and sustainability (wellbeing). This study argued that the lack of a culturally-rooted environmental education that allows Igbo students to draw from their cultural experiences and worldviews has contributed to the decline of Igbo Indigenous knowledge, to the extent that most young people do not know their local Indigenous resources and the language through which usefulness of these local resources are articulated. This finding is consistent with Keane (2008) regarding the loss of Zulu's Indigenous knowledge in South Africa. This is also consistent with Shava, O'Donoghue, Krasny and Zazu (2009), Njoki-Wane (2002), Mokuku (2012), and Awuor (2007) who in similar ways maintain that African Indigenous agricultural knowledge and cultural knowledge that sustains food production and connectedness to land has declined due to the lack of a culturally-relevant Indigenous environmental knowledge and the inability of environmental education to draw on rural women's local ecological knowledge. These various authors conclude that the wellbeing

of Kenya, Zimbabwe, and other African countries where these studies were conducted was negatively impacted.

My research also supports the idea of complementary epistemology, which is consistent with ideas presented by Ocholla (2007), Maila and Loubser (2003), Kawagley and Barnhardt (1990), Bartlett, Marshall and Marshall (2012), and Kapyrka and Dockstator (2012) that when Indigenous environmental knowledge is integrated with Western knowledge in creative ways that respect and honour Indigenous epistemologies and worldviews, such as experiential learning situated in local context, stories and issues affecting Indigenous (e.g., social justice and land/resource rights), it increases cultural relevance of the topic for Indigenous students. However, in the Igbo context, a complementary epistemology, according to this study, would have deeper implications, in the sense that it is the most viable way through which Igbo Indigenous knowledge can survive . This is so, as the study has demonstrated that cultural institutions or means through which transmission and propagation of Igbo Indigenous knowledge occur naturally are increasingly dwindling due to Western influences and Igbos' penchant for Western ways of life. As a result, Igbo Indigenous knowledge must be transmitted via the school curriculum, in order for Igbo culture and knowledge systems to survive. This, however, contrasts with Cobern and Loving's (2007) fear that Western knowledge will eclipse Indigenous knowledge if they are integrated, but could do better if they exist separately. I recognize the power relations issues confronting this type of integration but nevertheless consider it the best path forward.

Policy implications and recommendations

The theoretical frames and arguments in this study provides the justification for policy recommendations that could promote ideas that detach themselves from colonial sensibilities and mentalities and engender ideas and policies that advance Igbo Indigenous sustainability. Given the fact that Indigenous research is aimed at benefiting the community that the research is situated as well as providing them voice (Tuhiwai Smith, 1999; Kovach, 2012), I would like to reiterate some verbatim recommendations suggested by participants of this study. First, I present government/public policy recommendations:

1. The government should formulate educational policy that would make Igbo Indigenous knowledge and language compulsory in schools to encourage our mother tongue. It should be a requirement that of the nine subjects registered in the West African Examination Council (WAEC), one must be an Indigenous language. While some parents prefer to send their children to expensive private schools where Igbo language is less emphasized, the government must ensure that the curriculum is uniform across the educational system (Mr. Oha).
2. The school should emphasize Indigenous knowledge and take students to sites or places where they can see, experience, taste, and smell local knowledge through Indigenous environmental education (Mr. Oha).
3. The government should provide resources and expertise for the teaching of Indigenous knowledge. Village elders very knowledgeable in Igbo Indigenous knowledge should be invited to the classrooms; they do not have to be regularly trained teachers.
4. The educational institutions should organize and formulate a comprehensive Indigenous knowledge/Indigenous environmental education curriculum beyond what currently exists, which is a mere add-on to the Western knowledge-based curriculum.
5. The state media outlets should dedicate time and space to promoting Igbo Indigenous knowledge.

6. The Imo state government should (continue to) organize an annual cultural carnival that brings together cultural performing groups. This is a way of experiencing Igbo culture, and more of these programs need to be promoted.

7. The government must encourage research on Igbo Indigenous knowledge and build research institutions for Indigenous knowledge development.

Public policy by itself will not succeed if individual change of attitude for revitalizing Igbo Indigenous Knowledge does not occur. Therefore additional recommendations related to individual change are proposed by my informants. They are:

1. Igbo parents in the diaspora should regularly bring their children to the homeland. In this way they will be accustomed to Igbo ways, customs and traditions. When they come home they will interact with their mates and adult relatives. This is how they learn the African ways and reconnect to their roots (Mr. Oha).

2. The onus is on parents at the homeland and diaspora to teach Igbo Indigenous knowledge and language to their children. Parents should teach their children about the local environment and culture, such as how we use the resources found in our environment.

3. Igbo in the diaspora should invite their parents to come and spend some time with their children if they can. With the grandparents around at the very formative stages, the children can pick up Igbo language quickly, and it will stay with them for a lifetime (Elder, UK).

4. Igbo parents, together with their children, must actively be involved in Igbo community participation to foster interactions, unity with other Igbos, as well as to build relationships and Igbo identity formation. The Igbo need a strong Igbo Union for this to happen (ChiChi).

However, due to the complexity of these issues, informants also identified some challenges to these recommendations:

1. The claim of some traditional medicine practitioners is deceptive. Many claim to cure all kinds of diseases and infections without much verification. Practitioners must specialize in specific aspects of treatment – how can one herb or mixtures of herbs cure all kinds of diseases? What some of them do is simply mix herbs together and claims that it cures everything, and then sells it to the illiterate public, thereby making money from ignorant people. The government should regulate this industry in order to develop Indigenous knowledge and also restore confidence in traditional medicine. There are good traditional doctors out there, but the inherent deception in the practice has affected the general public confidence in the system. It was not the norm before, but the pursuit of materialism has corrupted the system. Hence, the government should get rid of the bad ones through strict regulations (Mr. Oha).

2. The attitudes and behaviours of some of our elites present challenges to the preservation of Indigenous knowledge. Many are not interested in Indigenous knowledge. The elites are the ones with comfortable lives and the youth look up to them as role models. If there is a traditional ceremony, such as *Oru Owere*, *Okorocho* or another traditional ceremony involving rituals, many will not participate in them. Many young people who see them as role models equally shun these traditional practices, and since Indigenous knowledge is associated with being at the bottom of the ladder, these traditional practices are avoided. Therefore, it is essential that the government and teachers embark on public education to correct this notion. Education should help Igbo Indigenous elites appreciate their culture and tradition and not despise it (Mr. Oha).

3. If you go to most of the universities in this region, few students are enrolling in courses such as agricultural science, and the most alarming is in the Igbo department, where you hardly see up to 5 to 8 students. Enrolment in the Igbo language and Indigenous knowledge courses has to improve in the universities. To improve enrolment, young people must be given incentives to study these courses. Also, Igbo Indigenous knowledge and language could be combined with other supposedly ‘lucrative fields’ in an interdisciplinary model, so that those that study Igbo in tertiary institutions can be gainfully employed. Specialists in Indigenous knowledge and the Igbo language must be provided with incentives because it is a viable way of encouraging interest in Igbo Indigenous knowledge (Mr. Oha).

4. Let it not be misconstrued as if I am trying to put Igbo culture down, but the fact remains that documentation of information is not part of most Indigenous cultures. Even though Igbo popular culture in literature and film is very rich, I still think that significant aspects of Igbo Indigenous knowledge (e.g. Igbo traditional medicine and bio-resources) are still lying out there in the villages waiting to be documented, and time is of essence as elders that know about these Indigenous resources are passing away. There is no doubt that Indigenous knowledge is there, but what effort has been made to document it in a book or in a database? Once that old man is gone, his knowledge dies with him. I think we should cultivate the culture of recording our knowledge so that we can pass it on to the next generation. The government should provide a fertile ground for these kinds of initiatives (Mr. Oha).

5. There is a scarcity of literature in the Igbo language. Even when some authors write in Igbo, there is no market for their work; nobody reads it. You see, many primary school students read fluently in English, but if you bring Igbo texts, they would say “Igbo is very difficult, I don’t know how to read it.” Assuming that they started at the formative stage, they would be able to read in Igbo. Most Yoruba know how to read in their native language, and no Hausa will tell you he/she doesn’t read Hausa books, but the Igbo person will without any shame tell you that he/she do not read Igbo books. In the olden days, those in the Anglican Church, even if they were not educated in the Western sense, were able to read the Igbo Bible. We call them ‘*Omara Bible ama akwukwo*,’ which means illiterates who can read the Bible. The reason is that the early missionaries realized that it was the surest way to convert the locals to Christianity. The question is, if the missionaries did that then, why can’t we do it now? This is a testament to the extent of the problem in the educational system, which is not functional anymore, and a society with misguided priorities. If the educational system is doing the right thing right from the onset, the problem will not be this huge. If they made English compulsory, why not make Igbo compulsory too, at least at the junior secondary school level. Igbo language teachers are often discriminated against by being posted to the rural areas. A few students take Igbo up to the school certificate level. I don’t think they have a department of Igbo language at Imo State University, and even if they do it must be a sub or minor department (Elder Amawom).

6. They tag any person rooted in Igbo language and Indigenous knowledge as a bush man and not progressive. People who are interested in upholding Igbo

traditional knowledge are seen as people beating their drum backwards or old-fashioned. They feel that if you're speaking the Igbo language, you have not arrived. But Bishop Obinna is doing as much as he can, and there are other organizations like "*Otu Suba kwa Igbo*" and "*Igbo Amaka*," translated as the Igbo language speaking association, which has been encouraging people to speak their mother tongue (Elder Amawom).

7. The get-rich syndrome amongst the young people is one of the greatest challenges to the development of Igbo Indigenous knowledge; in other words, it is an affirmation of the archetypical capitalist ideology. The Igbo value system is eroded, there is an inordinate quest for materialism, and this has resulted in all kinds of societal problems such as violent crime, kidnapping, robbery, etc. There must be a public campaign to restore discipline and sanity in Igbo society. The educational system must begin to inculcate the real Igbo values of honesty, modesty, cooperation, justice, and above all, the fundamental Igbo belief that "I am because of you", or like the Igbo adage puts it "*umunna bu ike*", which translates as my strength as an individual lies in my kinsmen (Elder Amawom).

Suggestions for future research

The research on the decline of Igbo Indigenous knowledge is a complex, multifaceted socio-cultural problem given that Igbos do not share identical views on issues concerning them. Igbos, whether living in homeland or in diaspora, have varied ideological and philosophical leanings in relation to social, cultural, economic and political issues affecting them. Moreover, Igbos are inclined to express independent opinion about issues. Therefore, one can rightly say that the only common ground for collective identity is on Igbo language (though with some dialectic variations) and geographical location in southeast Nigeria. With this in mind, I expect differences in views or opinions regarding the decline of Igbo Indigenous knowledge and approaches to dealing with the problem. To gain a more nuanced understanding of this socio-cultural problem, there is need for more studies at the homeland and the diaspora to allow further exploration of this

dynamic subject. Exploring the following issues as future research topics can add more nuance to the understanding of the decline of Igbo Indigenous knowledge and the possibilities of regenerating the knowledge system.

Firstly, this research is based on the approach of using Indigenous environmental education to revitalize Igbo Indigenous knowledge. Further research should be carried on using other avenues to regenerate Igbo Indigenous knowledge, such as using social studies and English language as approaches to revitalize Igbo Indigenous knowledge. The possibilities of using other approaches not situated within schooling to revitalize Igbo Indigenous knowledge should also be explored.

Secondly, a similar research and study should be carried amongst Igbos who lives in other parts of Nigeria, especially in Lagos, Abuja, and Northern Nigeria to explore the implication of their locatedness in the acquisition and transfer of Igbo Indigenous knowledge and language. Such research would enable us to better understand the extent to which location impacts on the acquisition and transfer of Igbo Indigenous knowledge, (and to compare it with other Igbo groups and diasporas examined here).

Thirdly, information garnered from this study indicates that there have been a few initiatives by the homeland to promote Igbo Indigenous knowledge, such as *Suba Igbo*, an Igbo radio program that encourages Igbo language and a host of others. Research is needed to understand how these initiatives compare with similar initiatives across Igbo diasporas.

Fourthly, this study suggests that complementary epistemology, a pedagogical approach where Igbo Indigenous knowledge is creatively integrated in social studies, English language, and science curriculum is essential for the continued survival of Igbo Indigenous knowledge and language. Additional research should be carried out to examine how teachers using this pedagogical approach in their practice have implemented it so far (and what successes and failures they have yielded).

Finally, my research suggests that some Igbos are well grounded in Igbo Indigenous knowledge. Well-grounded as it is used here implies an inclination to support, advocate, desire, and propagate Igbo Indigenous knowledge, regardless of where they are located. Further studies should be carried to investigate factors responsible for this type of positive attitude towards Igbo Indigenous knowledge, as this can help us maximize efforts leading to reawakening of interest in Igbo Indigenous knowledge.

Research Limitations

My endeavor was not to provide a definitive answer or solution to this complex problem, as this dissertation represents a particular perspective and not at all a generalized opinion of every Igbo person regarding the state or understanding of Indigenous knowledge in Igbo land. I understand that there could be different views and conclusions if the same research question were explored in a different situation, context or scope. However, this modest work provides insight into what is happening to Indigenous knowledge in Igbo land by considering a number of historical and socio-cultural factors causing the decline

of the knowledge system. Moreover, this research offers a pathway to further inquiry into this problem. I implore Igbo Indigenous scholars to continue this dialogue, as we need to keep this conversation lively. We must continue to explore how to make Igbo Indigenous knowledge relevant in contemporary modern society.

Closing Statement

In spite of the reported benefits of Indigenous knowledge for Indigenous communities and its connection to sustainable livelihood and the social, cultural and ecological wellbeing of Indigenous communities, Igbo Indigenous knowledge and language is declining. Evidence from the study shows that Igbo Indigenous resources and knowledge that support them have also eroded. My research, however, suggests that Igbo Indigenous knowledge is declining because it is considered a ‘low status’ knowledge in comparison to Western knowledge that guarantees material benefit in the modern capitalist society. This, in tandem with other issues such as Western influences and conveniences of development, and inadequate culturally-relevant pedagogical approaches that creatively integrate Igbo Indigenous epistemology in Igbo language instruction, further contributes to the decline of Igbo Indigenous knowledge.

In view of the dispersal and migratory tendency of the Igbos away from their original homeland in southeast Nigeria, the Igbo diasporic community in Toronto was considered in this research to examine the effect of locatedness in Igbo Indigenous knowledge transfer or what is commonly referred to as inter-generational transfer of Indigenous knowledge. This study demonstrates that location to some extent affects inter-generational transfer of Igbo Indigenous knowledge due the social environment in which

diasporic communities are immersed. However, what is more important as far as acquisition, transfer of Igbo Indigenous knowledge and favorable attitude towards Igbo Indigenous knowledge is concerned is not necessarily the location where Igbos live, but how well-grounded that Igbo person is. An Igbo can be well-grounded in relation to Igbo Indigenous knowledge matters regardless of whether s/he lives in homeland or diaspora.

Undoubtedly, many Igbos want their knowledge regenerated, therefore, the practical implication of this postcolonial/decolonizing research is the design of an Igbo Indigenous environmental education that has the possibility of promoting favourable attitudes towards Igbo Indigenous knowledge while also challenging taken-for-granted colonial assumptions about Indigenous knowledge. An Indigenous/environmental learning program (see Appendix B) is designed for homeland Igbos and diasporic Igbos, nevertheless, other cultural groups can also benefit from it.

I am optimistic that this research on Igbo Indigenous knowledge/Indigenous environmental education remains under-researched, particularly in Africa. The focus on both homeland Nigeria Igbos and diasporic Igbos is innovative, and hence, offers possibilities for advancing the field of African Indigenous environmental education research while adding more nuance and complexity to the discussion.

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Appendix A

Statements on the importance of complementary epistemology

To make education holistic, some Indigenous knowledge must be taught in the school curriculum. Students will have to be exposed to the academic subjects as well as the non-academic subjects. If one is not good in the academic subjects, they can learn how to make Indigenous arts and crafts; this is more or less integrating Indigenous knowledge with Western knowledge (Mr. Oha).

We need to balance Indigenous and Western knowledge. At least the Indigenous aspects of education will make them be respectful, cultural, properly behaved, and the Western system could qualify them to be medical doctors, engineers, lawyers, etc. The medical doctor needs to be culturally grounded, respectful and mannered because they have to respect others in the community. Indigenous knowledge needs to be incorporated into the school system especially at the primary and junior level (JSS 1-3); if they miss it at that formative stage, they have lost it forever (Mr. Oha).

There are many ways in which we incorporate Igbo Indigenous knowledge in the Western knowledge-based curriculum. For example, one metre is a full-length stride. When measuring the time of the day, children use their shadow to tell the time. If your shadow is at your back, it is evening, and when it is in front, it is morning. This is the measurement of time in the Igbo Indigenous ways. It might not be very exact but it gives you an idea of the time. The two knowledge systems can complement one another (Mr. Oha).

The Igbo language aids in the understanding of new concepts. When I was teaching ‘warehouse’ and ‘preservation,’ where we store things until they are needed, I gave them [students] the local example of how corn is preserved. Locally, corn is preserved over a fire place, while fish is preserved in *ngiga* (a metallic wire mesh built in various shapes) and hung over a fireplace. These products can last for more than one year without spoiling. The students were able to understand it better when I used the local language to explain, thus making better connections when cultural knowledge is integrated (Mr. Nkwo).

I would like Indigenous knowledge to be fully integrated into the curriculum because one is educated to solve problems in his/her community, i.e., the immediate environment. You're being educated to solve the Nigerian problem. If that is the reason for being educated, you have to learn the Indigenous language. The pioneers of African nationalism, people like Zik and Nkruma, went to the West, acquired the knowledge and brought it home to solve our problems (Elder Amawom).

We use Indigenous knowledge to forecast the weather and make predictions about harvesting (Mr. Nkwo).

Appendix B

Culturally-based Indigenous Environmental Education Course Curriculum

The conceptual framework for this course can be simply expressed in the following equation: **Indigenous Knowledge + Environmental Education = Indigenous Environmental Education.**

Dominant or mainstream environmental education has typically excluded Indigenous ways of knowing, focusing mainly on the Western science perspective for environmental preservation and management. This course focuses on the possibilities of using Indigenous environmental education to preserve declining Igbo Indigenous knowledge and language.

This course design is informed by my present research analysis and findings. My deduction is that even though Indigenous knowledge is present in the curriculum of schools in Southeast Nigeria as civic education and social studies, there is no comprehensive curriculum for Indigenous environmental education. Teachers have little or no experience or training in how to teach Indigenous environmental education; they lack the methodology and many do not know or understand the philosophy behind environmental education.

Based on my research so far, it seems clear that there is poor knowledge of our local environment, poor knowledge of our tradition and culture, a decline in the Igbo language and Indigenous knowledge, and resource depletion and ecological degradation. This course design is aimed at addressing these issues through an Indigenous methodological approach.

Course Objectives

1. To encourage critical reflection on the local environment and question agents of change;
2. To regenerate Igbo declining Indigenous resources;
3. To deepen knowledge of the local environment through experiential interaction.
4. To encourage engaging in community participation;
5. To understand and uphold the symbolic significance of Igbo traditions and culture;
6. To help students understand the need to maintain hope and keep the flames of Igbo Indigenous knowledge and tradition burning;
7. To encourage Indigenous learners to critically interrogate Western knowledge systems rather to take them as given;
8. To encourage the use of Igbo language in teaching and learning;

9. To help students rid themselves of colonial mentality, which constrains the preservation of Indigenous knowledge.

Indigenous Methodology

Indigenous/decolonizing methodology is a research framework that approaches research and knowledge production from the perspective of Indigenous epistemologies and ontology (Root, 2010). Indigenous approaches to knowledge honours and respects Indigenous ways of life and being. Indigenous methodology recognizes the spiritual, social, political and the historical experiences that continue to shape the lives of Indigenous peoples (Root, 2010; Steinhauer, 2002). Indigenous methodology involves critical decolonizing processes to interrogate and counter Eurocentric hegemonic narratives resulting from colonialism, such methodology could perhaps decolonize the mentality of the colonized, in this particular instance Igbos. Thus, Indigenous methodology and a decolonization project go hand in hand because you cannot respect Indigenous knowledge/Indigenous environmental education without recognizing the various ways in which Western Eurocentric knowledge has (mis)represented Africans and other Indigenous peoples that experience colonization. With this in mind, this Indigenous methodological approach to environmental education seeks to critically question and deconstruct Western views about Africa and her people. Thus, this Indigenous environmental education course acknowledges colonial distortion and representations of Indigenous cultures and histories, as well as the oppression of Indigenous peoples. This Indigenous environmental education course therefore becomes a political tool to rearticulate the views of Indigenous peoples about their histories and cultures (Tuhiwai Smith, 1999; Kovach, 2012), a view different from what the colonizer's represented about Africa.

The African mode of education, as Omolewa (2007) notes, is a lifelong learning. Thus, traditionally, African Indigenous education is a lifelong experiential interaction with the environment. As a result, I argue that Indigenous environmental education is the natural means through which Indigenous knowledge is transmitted. This is why I believe that the preservation of Igbo Indigenous knowledge can be more effective through Indigenous environmental education, which conforms to the Igbo traditional epistemological approach.

I believe through the Indigenous methodological approaches below, students will develop the necessary knowledge and skills to preserve their Indigenous knowledge as well as protect their local environment.

Course Methodology

The instructional methods for this course are:

1. Narrative

2. Experiential
3. Cultural experiences

Below I briefly outline the learning experiences in the course and the methodological approaches suitable for each experience. Igbo Indigenous knowledge experts i.e., the elders and knowledgeable adults in Igbo IK (and not necessarily certified teachers) will be invited to tell their stories about Igbo Indigenous knowledge and cultural practices. Some of this teaching will be presented experientially, through plays and dramatization.

Narrative Experiences

To keep the culture and tradition alive, symbolic Igbo traditions listed below will be explored through narrative experience. Experts in various aspects of Igbo tradition will be invited to give a narrative or story of Igbo traditions. I will only provide a vignette of these traditions. Following the narrative, students would be asked to dramatize or role-play the narrative.

*Igba Nkwu or marriage or wedding ceremony*¹²

Marriage is exceptionally special in traditional Igbo society. It is the pride of a young man and the greatest thing to happen to the Igbo woman. Marriage involves elaborate traditional ceremonies between the families of the bride and the groom, as well as their communities and well-wishers. In Igbo marriage ceremonies, every member of the community participates.

In Igbo land, marriage is initiated when a young man comes of age and determines that it is time to settle down. Coming of age can vary in different circumstances. Say for instance, that a young man is the only child or the only male child: early marriage for that young man is necessary. Both the man and the woman must mutually agree to marry each other. There is nothing like arranged marriage in traditional Igbo society. Both parents must consent to the union, and before this consent, the parents check out the other family's history and background. The history of mental illness or premature death in a family, and other minor reasons derived from superstition can prevent a marriage. Usually the parents approve of their sons' and daughters' choices, but there are exceptions when the parents will not approve the marriage. Today, some sons and daughters proceed with the decision to marry even when their parents object to it for whatever reason. In these cases, the parents may decide not to bless the marriage.

Assuming that all seems well, marriage can then proceed. In traditional Igbo society, marriage begins with the groom and his immediate family and close friends paying a visit to the bride's immediate family. On a scheduled day, outside the prohibited market days, when paying such visits may be seen as out of the norm or an abomination, the young man's family will carry two jars of traditional palm wine, hot drinks, and kola

¹²Only a vignette is provided here, for a detail account see Obi (2010).

nut to the bride's family. These items are very symbolic in traditional Igbo marriage. Special gifts and other drinks might also be included in the first visit. This first symbolic visit is however termed 'knocking at the door.' After they are seated and welcomed by their host with the ritual presentation of kola nut, they will announce the purpose of their visit using Igbo idioms and figures of speech. A well-spoken elderly member of the groom's family usually uses a figure of speech to declare their purpose, such as

“There is a very beautiful tree we are looking for, but it seems we have seen that beautiful tree in your compound” or “there is a beautiful animal we are pursuing, and lo and behold it ran into your compound.”

There could be variations of this idiom depending on where one is in Igbo land. At this point, there would be no further explanation of the purpose of the visit, because the idiomatic expression says it all. According to Chinua Achebe in *Things Fall Apart*, idioms are the palm oil with which words are eaten in Igbo land. To highlight the importance of proverbs or figures of speech, there is an idiom in Igbo that says “if you have to explain the meaning of an idiom to an Igbo person, the bride price paid on his/her mother's head was a waste.”

As the drinks and food are being served, the bride's father will ask a girl or the bride's mother to call the bride. When she arrives, she is told the reason for the visit and asked whether or not she likes the young man. Her agreement to the proposed marriage leads to a marriage ritual, in which she will be given a cup of palm wine to give to the groom. When she locates the groom, she will stoop down, take a sip of the wine and give the groom the cup. She then quietly walks away to her mother's kitchen. While the celebration is going on, the bride and the groom might have some time to chat and have a quiet time.

There is another ceremony that follows the first visit. At the agreed time, the groom's family will come back to pay the bride price or the dowry. This ceremony involves a big party. Usually the groom is accompanied to the bride's family with his whole family as well as friends and well-wishers. The father of the bride welcomes the guests with his whole extended family. The bride and the groom and members of their extended families are adorned with expensive traditional attire. When the guests are seated, the bride's family presents a long list of items to be purchased. The elders from both families haggle over the price and the money to be paid, and at the end of it all, an agreement is reached. After paying this substantial bride price, the bride's family salutes the guests and then the party begins. The size of this party depends on how deep the families' pockets are. It features traditional dances and a live cultural band. This dowry payment party is known in Igbo land as the *Igba nkwu* ceremony. The bride is beautifully adorned in her attire with her aids being mainly her girlfriends. The climax of the ceremony is when the bride and groom are called to the stage to dance. As they dance,

well-wishers lavish them with gifts and money. At the end of the party, the bride may give well-wishers some gifts.

Iwa Akwa

This is a ceremony that signifies the coming of age and maturity. In most Igbo communities, there are slight variations in this ceremony. It is usually celebrated at the beginning of the year, in the town's market square, which is beautifully decorated. Boys and girls of the same age group are adorned with elaborately designed traditional attire. There is a display of traditional dances, masquerades and a wrestling competition. Family, friends and well-wishers of the youth coming of age gather at the market square to celebrate with them. Each of the celebrants is lavished with gifts by friends and family. At the end of the ceremony, the youth involved are seen as responsible adults in the community, which comes with certain responsibilities and obligations, such as contributing to community development.

Iri ji

Natural historians claim that yam (a tuber crop) originates in West Africa. In Igbo land, yam is regarded as the king of crops, thus the eating of the new yam is preceded with a traditional ritual known as the New Yam Festival. Yam is planted around October to January and harvested around August the following year. The New Yam Festival is held around August, and some Igbo living outside of Igbo land make their way back to celebrate this festival. In some parts of Igbo land, a whole community is involved in this ritual ceremony, while in some communities, it is performed hamlet by hamlet, and in others, each extended family performs their own. The festival typically involves cooking yam with fresh fish or with hard male chicken, served with palm wine. The elder of the family or the hamlet says some incantation to appease the gods and asks mother earth to bless the harvest. The New Yam Festival is simply a harvest festival with some ritualistic performance. Unfortunately, most Igbo who have embraced Christianity are shunning this ceremony as a pagan festival.

Igbu nkwu

This is a communal harvesting of palm fruits used to raise funds for community development projects. I have explored this extensively elsewhere in this dissertation.

Iku Ngwo

The palm tree is a symbolic tree in Igbo land. The tapping of the wine from the palm tree is known as *iku ngwo*. Unlike the brewed red wine, the traditional Igbo wine is very white in colour with a lot of natural medicinal yeast. There is no ceremony in Igbo land that does not involve the drinking and pouring of palm wine. Wedding, burial, marriage, and

many other ceremonies involve rituals with palm wine. The art of palm wine tapping is a useful traditional skill in Igbo society. The process of tapping a palm wine tree involves making an incision on the upper trunk of the palm tree and a calabash is hung over the incision to collect the whitish juices. A skilful tapper uses herbs to add flavour to the drink. Every morning the tapper climbs the palm to empty fresh wine from the calabash. People relish the sweet aroma and taste of fresh palm wine. A skilful wine tapper could tap a palm tree for up to six to nine months. Bees like the smell of wine and usually make a bee hive on the tree. A skilful palm wine tapper thus harnesses both palm wine and honey from a palm tree. It takes many years for a palm tree to mature for tapping. For several years before maturation, the palm fronds from the tree are used for the roofing of the traditional thatch houses. The “banbo” trees (side branches of the palm tree) are used to make beds, so the climax of its maturation is when it is tapped for palm wine. At the end of the tapping of the palm tree, the tree dies. Some of the trees are not tapped because they’re used to propagate or replenish the trees. Before the tree dies, it produces a bunch of seeds from which it can be replenished. It only produces these seeds at the end of its life cycle. Because of modernization and development, young people are no longer learning these traditional skills and these beautiful trees are not replenished and are thus endangered.

Omugwo nwa

The Igbo culture attaches much significance to the birth of a new baby. The baby is welcomed with a shout of joy by women in the village. Following this comes ‘*Mmaya oro*,’ which involves the drinking of palm wine and a feast shared by the women. During the four to eight weeks of *omugwo*, the woman who gave birth is spoiled by the husband and the mother-in-law. She will not do much, as close family members will attend to whatever she needs. She is served with rich smoked fish as well as stock fish prepared with traditional herbs and spices. Within this period, the child is given a name. The child-naming ceremony is a big deal in traditional Igbo society. Parents usually give their children names that reflect their experiences or their beliefs (Obi, 2010). A child may have several names given by parents, grandparents, uncles and aunts. The name the parents give the child usually becomes the child’s adopted name. Most Igbo names invoke God, and there is a prefix or a suffix of *chi* or *chukwu*, such as in Chinedu (God guides), Chukwuemeka (thank God), Ugochukwu (God’s glory), Chinyere (God’s gift), and so on. This reflects the deep spirituality of the Igbo. At the naming ceremony, food and drinks are served and people might bring gifts and money to the mother of the baby.

Iwa orji

Kola nut is very symbolic in traditional Igbo society. The three ethnic groups in Nigeria, the Igbo, Yoruba and Hausa, eat and celebrate the kola nut. There is a saying that “the Yoruba produce it, the Hausa eat it while the Igbo celebrate it.” The Igbo relish kola nut

and there is no ceremony that begins without its ritual breaking. The first thing you offer a guest is a kola nut, indicating a welcome. The ritual breaking of kola nut involves the invocation of ancestral spirits, the gods of the land. It is usually said that, “he/she who brings kola brings life.” A kola nut seed may have many lobes, usually about two to six. The number of lobes a kola nut seed has bears meaning and cultural significance. For example, a kola nut that has three lobes is highly cherished in Igbo land. It depicts strength and completeness. A one-lobe kola nut is not eaten and is thrown away since it is regarded as an abomination. The cultural significance of the kola nut outweighs the real value, as every ceremony of the Igbo starts with the ritualistic breaking of the kola nut. Typically, the host offers the guest the kola nut, however, depending on the situation, the guest can reject the kola nut, such as during a land dispute, or when a woman is mistreated by her husband and the family and kinsmen of the woman came to complain or even take their daughter back to her father’s house. There are other occasions when a guest could refuse a kola nut, but other than such circumstances, kola nut is not refused in Igbo land. In a gathering, a young man is called to break the kola nut, while the oldest man or titled man performs the ritual of the kola nut, and subsequently, the broken lobes are shared by people in the gathering.

Igba mgba

Igba mgba is a traditional wrestling sport organized amongst the age-grades. It is used to entertain the villagers during cultural festivals. It teaches discipline and the value of strength. There is no hitting in traditional wrestling; it is like the Olympic wrestling, in which the athlete with the greatest dexterity throws his opponent on the ground. Whoever lands on the ground on his back loses the competition. It is not a violent sport like present-day wrestling in the sense that no hitting or punching is involved.

Ikwa ozu

This is the burial ceremony. Dead bodies are well-respected in Igbo land; it is an abomination to desecrate a dead body. The elaborateness of the burial ceremony depends on the age, status and title of the deceased person. In Igbo culture, when a child dies there is no ceremony whatsoever. The child is simply buried on the family’s land. This simple burial with no ceremony reflects the pain in the death of a child. The extended family and sympathizers in the village encourage the immediate family, especially the mother, to stop crying with consoling statement like “the child did not come to stay and if the child wished to stay, it would live.” The death of a youth or an unaccomplished young person is equally not celebrated that much. Usually when a mature or an elderly person dies, it goes with traditional celebration and rituals. For a wealthy titled man or woman, it could go on for months after their death. Following the death of a mature woman or man, the body is deposited in the morgue, but traditionally, the body was embalmed for a number

of days or several weeks, depending on the status or the wishes of the family. The bereaved family may not engage in any sort of cooking in their compound, but they will be constantly supplied with food by their extended families. Before the burial, the children of a wealthy man or woman may buy live cows for slaughter for the villagers. The number of cows depends on the deepness of their pockets. I have seen as many as fifty cows bought for a burial rite. Sometimes some wealthy people do this to show off. On the day of the burial, every member of the family is dressed in a specific way. The young men in the village are commissioned to dig the grave, and there is a ritual that goes with this. Most mature men and women are buried in their family compounds. Following burial, the immediate family of the deceased shave their heads and dress in black, and sympathizers including in-laws, members of the cultural organizations and age-grades that the deceased belonged to are seated under canopies and entertained with food and drinks. Live cultural performances entertain the guests and sympathizers. The wife or husband or the children of the deceased person mourns for one year. If the woman or man belongs to many traditional organizations, within three months of the burial each of the organizations will come and perform final traditional rite for the deceased, called ritual breaking of the cup or a severance of ties with their dead member. At the end of one year, the family removes their mourning clothes and holds a ceremony, but not as flamboyant as the first.

Masquerades

In traditional Igbo society, masquerades mirror society, and there are certain myths associated with them. They are used to instil discipline in society, and sometimes used to collect debts. For instance, if someone owes the community and does not want to pay up, the masquerades can be used to facilitate payment. In Igbo mythology, masquerades are regarded as spirits, so you cannot argue with the spirits. When the spirits come, it is either you pay up or you face the dire consequences. Grievous offenses are checked and corrected by the masquerades. Unfortunately, some of these traditional institutions are no longer there, which is why all kinds of evil have multiplied. Masquerades are also used for entertainment, especially during cultural festivals. In modern-day Igbo society, there are masquerade shows during Christmas and the New Year, however, it is a caricature of what it used to be in the 1970s and 1980s; it is gradually dying away.

Because of the scope of this work, I will not give a detailed account of all Igbo traditions; only a mention of some will be included here. As stated earlier, traditional experts will be invited on a regular basis to narrate these traditions to students.

1. *Iru mgbede* – bridal preparation before marriage
2. *Ife ero* – mushroom gathering
3. *Egwu onwa* – moonlight games

4. Folklores and plays
5. Igbo cultural music and art
6. Igbo traditional attire
7. Igbo market days
8. *Oru ugbo* – farming
9. *Isu oru* – bush cutting (following land preparation)

Some of the traditions above involve a lot of rituals. Simple things like cutting down the bush before farming involve symbolic cultural practices.

Experiential Activities

In view of the fact that Indigenous environmental education is experiential, students will be exposed to the natural environment in order to make connections with it. My experience from my interviews and fieldwork shows that young Igbo people, especially those living in very urbanized settings, do not know their local ecologies. For instance, one of my participants recounted how his 10-year-old asked him the most bewildering question of his life: “Daddy, where does cassava come from? Is it plucked from a tree like an orange?” It is not surprising that this poor girl do not know that cassava, as a root crop, is not plucked like an orange but buried underground, like the yam tuber. Karen Matsumoto (2003, p. 1) observes that “it is difficult for a person to care deeply about anything that he or she hasn’t experienced or doesn’t know much about. It is unrealistic to expect our children to care about their neighbourhoods, much less the earth, if we haven’t taught them to see it and to feel what it means to them.” In the light of this, experiential activities in a natural environment are a powerful way to get young people to know their local environment. It also helps them to develop a sense of caring commitment, as Matsumoto (2003) notes.

Regeneration of Indigenous plants

It is sad to note that most Indigenous trees native to Igbo Land are endangered, and some are threatened with extinction. Most of these trees are deciduous and evergreen trees found in the tropical rainforest climate of Igbo land, with a life span of several decades, and some more than a century. The endangered Indigenous trees and plants include the following: *Okazi, Ugba, Udara, Ubena, Ununna, Ukwa, Aku, Ukpa, Ogirishi, Ube, Nmimi, Oha, Nturuksa, Uda, Akuruma, Oji, Ose oji, and Utu.*

This list is not exhaustive of the endangered plants and trees in Igbo land. Many of these native trees and plants have economic, medicinal, and ornamental value, while others have ecological values as they act as wind-breakers or help to control erosion. A good number of them serve as food and some are culturally symbolic. Many of these plants can only be found in ecological zones in Southeast Nigeria, such as *udara, oha, ugba, ogirishi, and ube.* There are traditional ways of renewing these trees and plants. For

instance, when a woman is married, she would take seeds or transplant seedlings of these plants to her husband's compound, and over the course of time the trees would come to maturity and the woman claimed ownership of the trees. These renewal processes are no longer there. In my family, we still reap and harvest some of the trees my mother brought from her village to my father's compound decades later.

In the course of my fieldwork, I heard that the past Imo state government was taking initiatives to renew some Indigenous resources, but the results are very minimal. The new varieties or cultivars developed by government initiatives do not have the longevity the original breeds had. They only last a few years, at most 7 to 10 years, unlike the original breeds that lasted several decades and sometimes centuries. We know how to regenerate the Indigenous breeds; it is just that a concerted effort is not being made in that direction. Consequently, to encourage the renewal of these Indigenous resources, Indigenous students and adults will be given the opportunity to plant any of the trees listed above or those not included in the list. They will have to plant these trees in their villages, and assessment will be based on successful planting of the chosen tree. It is important that they know how to grow the trees, as some of the trees are planted from seed and others by vegetative processes or regeneration.

The practical benefit of this doctoral research for me is to relate theory to practice, and the work I have done in this field so far has awakened my desire to make a meaningful contribution to the regeneration of Indigenous resources. To that end, I have created a non-governmental organization (NGO) called GREEN CORPS to help promote awareness of Indigenous knowledge and replenish endangered Indigenous resources through Indigenous environmental education. One of the programs I have planned is called TREE FOR MONEY. Tree for Money is a resource renewal program to encourage the replenishing and renewal of endangered plant resources in Igbo land. This initiative will require funding for successful implementation. In order to encourage people to plant Indigenous trees, they would be given incentives of 30 to 40 dollars. They only receive the incentives once inspection is carried out to ascertain that the seedling of a chosen native plant is doing well. I am optimistic that this initiative can remove most of our Indigenous plants from the endangered list.

Tree/plant naming through forest exploration

As stated above, as often as possible, experienced elders or people knowledgeable in Indigenous knowledge will be invited to lead discussions and explorations, and for this activity, an elder will lead the exploration of a local forest and other local ecological sites such as streams and rivers and nearby wilderness. As the elder names the trees and their uses, students must note them down and collect a sample of the leaves, roots, bark and/or stem, as required. When they come back they have to preserve the specimens to make a botanical album, listing the name of each plant and its uses.

Forest camping

Students will camp in the forest and explore it fully. They will have to pick edible wild fruits as well as edible mushrooms. The essence is just to experience nature and connect to it in an intimate way. Native animals will be observed.

Discussion Topics

The purpose of these discussions topics is to encourage critical perspective on some issues that affect Indigenous people, in this case the Igbo people. Critical pedagogy plays a very key role in this respect. Students will be encouraged to interrogate phenomena or issues affecting them economically, socially, culturally, politically, environmentally, ecologically, spiritually and otherwise. Critical pedagogy is a liberating experience in the sense that it liberates students from the dogmas of dominant worldviews, most of which are Western perspectives. Indigenous students will use the theoretical perspectives undergirding this study (postcolonialism, decolonization and critical pedagogy), as described in Chapter 2, to question dominant narratives. Indigenous students should apply anticolonial methodology (Dei, 2003) and decolonizing methodology (Tuhiwai Smith, 1999) to interrogate Western ideas and the whole notion of development and knowledge.

Topics that affect Indigenous people to be discussed include:

- Development
- Indigenous resources
- Media literacy
- Igbo Indigenous language
- Initiatives to regenerate Indigenous knowledge
- Governance and social responsibility
- Poverty and Indigenous sustainability
- Usefulness of Indigenous knowledge vs. Western knowledge
- Others

Assessment and Evaluation

To complete this course, students are required to:

1. Critically explore an aspect of Igbo Indigenous/traditional culture and juxtapose it with current Western influences to examine how Western influences have affected this tradition.
2. Successfully plant an Indigenous tree from those listed in the course description.
3. Develop a well-preserved botanical album comprising Indigenous plants and their uses.

This course is most suitable for SSS (Senior Secondary School) and university students; however, it can be modified to suit primary students. Finally, this is not a complete panacea for the regeneration of Indigenous knowledge and renewal of Igbo Indigenous resources, but it will definitely go a long way to creating awareness in order to tackle this mammoth of a problem.

Specific Sample Lessons Demonstrating Complementary Epistemology

Lesson 1: Erosion prevention in southeastern Nigeria

This lesson demonstrates how Indigenous knowledge and Western knowledge can be meaningfully combined.

Learning Goals:

- Identity the ecological, economical and human hazard implications of erosion in southeastern Nigeria through fieldtrips to erosion sites in Imo state;
- State various Igbo Indigenous ways of preventing and combating erosion;
- Demonstrate an understanding of Igbo Indigenous agricultural practices that check erosion and conserve soil nutrients;
- Demonstrate an understanding of potential conflicts between Igbo traditional soil/land conservation practices and modern agricultural practices. For example, modern agricultural practices condemn bush burning as unfavourable to soil conservation and microbial activities in the soil.

Teaching Content and Learning Experiences

- Highlighting Igbo agricultural practices that check erosion and conserve soil – shifting cultivation, land fallow, bush burning, mixed cropping, mulching, and avoidance of clear-cutting;
- Drawing from Igbo and Western/modern agricultural practices to benefit a local farmer as well as help reduce erosion;
- Explaining the role of poor development planning in erosion menace in southeastern communities in Nigeria;

Assessment: Students will write a 6-page research paper on specific contents of the lesson.

Lesson 2: Using nutrition guide to identify Indigenous food sources that meet nutrient needs.

Learning Goals:

- Eating the right food for a balanced diet;
- Maintaining a healthy lifestyle;
- Reducing risk of nutrition-related chronic diseases such as diabetes, heart disease, hypertension, kidney disease and cardiovascular disease given that there is high prevalence of these health problems;
- Contributing to the health and vitality of Igbos;
- Applying the understanding of Canada's Food Guide (for example) to identify Indigenous food products that supply healthy nutrients.

Contents/Learning Experiences

Food groups – vegetables and fruits, grain products, milk and alternatives, meat and alternatives, etc.

Relevant questions for the exploration of the lesson:

1. In what ways has reliance on eating of fast food and processed food, a lifestyle previously alien to Indigenous Igbo people had affected the health of the people?
2. How would reverting to Indigenous food and lifestyle contribute to the health of the people?
3. What benefits does nutrition guide provide to Indigenous students as well as local villagers?

Practical Applications of Knowledge

An exploration trip is organized where students gather data on Indigenous foods and classify Indigenous food according into categories in the nutrition guide. Students are assessed on how well they classify 20 Indigenous food products into categories in the food guide. A 5-page critical essay on any of the questions raised in the topic is considered as an additional requirement in the lesson.