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**EDUCATION FOR ALL (EFA) AND THE ‘AFRICAN
INDIGENOUS KNOWLEDGE SYSTEMS (AIKS)’: THE
CASE OF THE CHEWA PEOPLE OF ZAMBIA**

DENNIS BANDA, BA ED, M PHIL

**Thesis submitted to the University of Nottingham in fulfilment for
the degree of Doctor of Philosophy**

April, 2008

DECLARATION

I declare that this thesis is the product of my own effort and has not been presented to any University in the same or different form to merit a PhD degree other than that for which I am now a candidate.

Signed.....

DENNIS BANDA

April, 2008.

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Dennis Banda

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ABSTRACT

This research is an investigation of whether “African Indigenous Knowledge Systems (AIKS)” can enhance the achievement of Education for All (EFA) with particular reference to the Chewa people of Zambia. The study raises challenges that many countries have experienced in their effort to achieve EFA. Among the Chewa people of Zambia, quality, relevance and credibility of the education are some of the reasons affecting the provision of education to all. This research has argued that formal schooling education, in its current form may not be the right vehicle to deliver EFA goals. The research has proposed alternative forms of knowledge that could be hybridized with the formal schooling education to address some of the challenges identified. The research has tried to re-appropriate some Chewa AIKS to theorize curriculum and pedagogy reforms that could enhance the achievement of the EFA goals.

I have used qualitative research methodology in the study. The respondents in this study were drawn from two areas of community of practice i.e. the Chewa traditional chiefs and elders as perceived custodians of the Chewa AIKS and the educationists, as implementers of education programs and policy and curriculum designers. Key issues identified by this research include the following: that a replacement of the formal schooling education by the AIKS is not an answer to the current challenges facing the provision of meaningful education to all; that through consultations, and co-ordination by all stakeholders and research in AIKS and formal schooling education, either system would shed off elements perceived as barriers to EFA; and be hybridized to complement each other to enhance the achievement of EFA goals; that the formal schooling education should not be considered to be superior to informal and non-formal education systems, but that all are critical components in this quest. Theories and frameworks of hybridization of forms of knowledge/education have been considered in this research.

I have argued that hybridizing AIKS with the formal schooling system will only become significant if an economic value is added to the AIKS through some mechanisms put in place. The practical skills embedded in AIKS could foster career building, entrepreneurship and apprenticeship if linked to the money economy of employment and wealth creation. I have argued that there may be need to establish opportunities for AIKS holders to be accredited within the National Qualification Framework and policy framework on AIKS be enacted to regulate and protect IK, and guide the hybridization process. The study highlights three main frameworks on the hybridization of the AIKS and the formal schooling curriculum: (1) Mainstreaming/ Incorporation/ Integration/ infusion of the AIKS into the formal school curriculum. (2) Establishing IK as a core subject with a structure similar to those of other core subjects in the curriculum. (3) Teaching AIKS as a component of the seven official Zambian languages that are taught in schools.

LIST OF ABBREVIATIONS AND ACRONYMS

AIKS	African Indigenous Knowledge Systems
AKRSI	Alaska Rural Systemic Initiative
ANKN	Alaska Native Knowledge Network
BESSIP	Basic Education Sub-Sector Investment Program
BSAC	British South Africa Company
CDC	Curriculum Development Centre
CEFAE	Compulsory Education for All Europeans
ECZ	Examination Council of Zambia
EFA	Education For All
EFAC	Education For All Children
EFD	Education for evelopment
ESR	Education for Self- Reliance
IK	Indigenous Knowledge
IKS	Indigenous Knowledge Systems
IMF	International Monetary Fund
LK	Local Knowledge
MoE	Ministry of Education
NFBE	Non-formal Basic Education
NFE	Non-Formal Education
NGO	Non-Governmental Organization
PAGE	Program for the Advancement of Girls' Education
REFA	'Religious Education For All'
SAP	Structural Adjustment Program
TBA	Traditional Birth Attendants
TEVETA	Technical Education, Vocational and Entrepreneurship Training Authority
UNESCO	United Nation Education Scientific Co operation
UNO	United Nations Organisation
WKS	Western Knowledge Systems

GLOSSARY OF CHEWA WORDS

Anamwali	Girls who have reached puberty stage
Anamkungwi	Counsellors
Buthu	A young girl before reaching puberty stage
Bwalo	The place where <i>Nyau</i> performances take place
Bantu	People
Chinamwali	The <i>Chewa</i> girl's initiation ceremony
Chichewa	The language of the <i>Chewa</i> people
Chomwera	Referring to those who have been initiated into the <i>Nyau</i> School
Dambwe	The place where the <i>Chewa Nyau</i> camp for instructions
Dona	Respected woman's title
Edzi	<i>Nyau</i> mask representing AIDS
Galimoto	A car- here referring to <i>Nyau</i> mask structure
Honda	A motorbike (<i>Honda</i>) – here referring to <i>Nyau</i> mask structure
Gawa	The distributor (one title for the paramount chief of the <i>Chewa</i>)
Gowero	Boys' dormitory
Gule wamkulu	Great dance (<i>Nyau</i>)
Gwere-gwere	Graduation ceremony of the boys after the <i>Nyau</i> initiation
Kasiya maliro	“That which leaves a funeral.” The primary <i>Nyau</i> animal
Kalonga	The one who installs sub ordinate chiefs (Title for <i>Chewa</i> kings)
Kaliondeonde	AIDS like Disease that makes its victims become thinner and thinner
Katumbiza	The <i>Nyau</i> that educates on family planning (need for spacing)
Kulamba	Thanks giving ceremony of the <i>Chewa</i> people
Kumtondo	A women's gathering place (<i>Mtondo</i> is a mortar)
Mbalangwe	<i>Nyau</i> mask for a white person (man or woman)
Mbumba	Sisters and nieces in the matrilineal society
M'bere	Breast but here means family tree
Madimbiko	Mock cooking and role-plays by girls before puberty for training
Maliro	Funeral
Manda	Grave yard
Maphunzilo	Education/ Literacy/ Learning
Makanja	The tall <i>Nyau</i> that dances on stilts
Mzungu	White person or a <i>Nyau</i> wearing a white person mask
Ng'ombe	<i>Nyau</i> cow mask to ridicule the <i>Ngoni</i> people
<i>Nyau</i>	The men's closed school or association of the <i>Chewa</i> people
Ngwee	Glow light
Nkhoswe	Brothers or uncles in the matrilineal societies
Nkhalamba	Old man/woman- <i>Nyau</i> mask for elderly person
Omwera	The initiates of <i>Nyau</i>
Tsempho	<i>Nyau</i> mask for diseases
Vigubu	Drills and dances done as rehearsals for matrimonial preparations

CHAPTER ONE

CONTEXT AND PURPOSE

Introduction

The first part of this chapter presents a general background to the country of study - Zambia. A brief account of the existence of kingdoms before the coming of missionaries is given as part of the background information. Secondly, the chapter looks at factors that may have influenced my choice of the research topic. It is here that you see the 'me' in this thesis. The chapter then presents the research problem in its context. The main research question is stated. In order to focus on specific issues in the research question, subsidiary questions are also included. These questions will guide this research so that it is more focused on the specific issues to be investigated. The chapter ends by outlining the structure of the whole thesis.

General background to the country of study: Zambia

Zambia is one of the countries in Sub-Saharan Africa, formerly colonised by the British. It gained its independence on 24th of October 1964. It is a landlocked country surrounded by eight countries namely: the Democratic Republic of Congo, United Republic of Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. As seen on the map below, the Chewa people are also found in two other neighbouring countries namely Malawi and Mozambique.

Picture 1 Map of Zambia showing her neighbours and the location of the Chewa people



Source: Map of Zambia: (online) ¹

Zambia is a large country, as large as France, Switzerland, Austria and Hungary put together. It covers some 752,614 square kilometres and lies in the tropical belt of South Central Africa. The country has many lakes and rivers with beaches and water sports to be enjoyed. Zambia is home to the famous Victoria Falls, locally known as *Mosio-ntunya* (smoke that thunders). It is one of the Seven Wonders of the World:

¹ "Online" will be used in this study when quoting internet sources with no page. In the bibliography the website and date of retrieving are given.

Picture 2 The Victoria Falls in Zambia



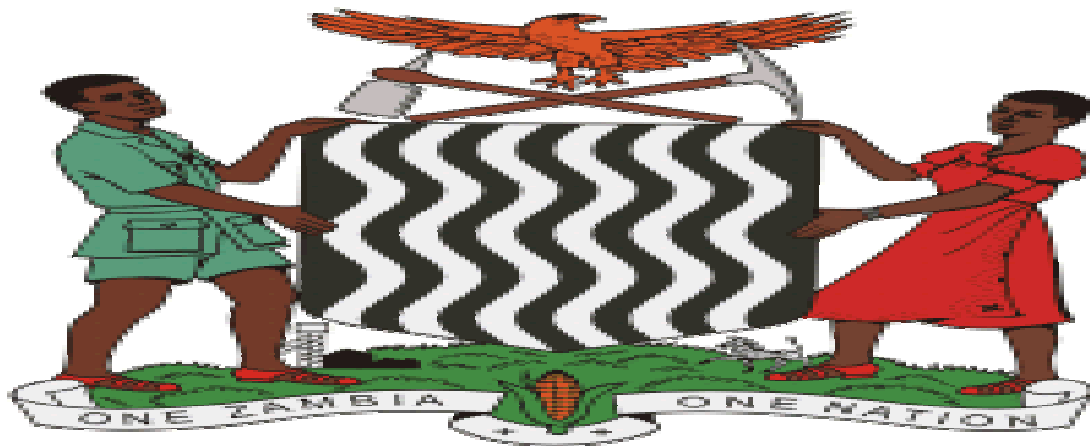
Source: Victoria falls: (on line).

It is a sparsely populated country. The total population is estimated at 10.7 million, giving a population density of 11 persons per Square kilometre. The 2000 population census put the population living in urban areas at 42%, making it one of the highly urbanised countries in Sub-Saharan Africa. Interestingly, 49.1 per cent of the population are under 15 years of age. These are the children who are supposed to be in school. The population density in big urban areas like Lusaka stands at more than 200 persons per square kilometre. Over 60 per cent of the population live in the rural areas and only 2% of that has access to electricity and piped water (Serpell, 1993; Machungwa, 2005). The majority of the rural population make good use of African Indigenous Knowledge Systems (AIKS) to meet challenges² of their everyday lives (Carmody, 1999). Current debates in parliament suggest that fifteen years after Serpell's findings, (Serpell, 1993) the rural Zambia still faces similar challenging situations. Between 80 and 95 per cent of children entering primary school in rural Zambia do not make it to secondary education. They drop out or are pushed out of school (See Table 3) due to limited places in few secondary schools available. However, there are also some pupils who leave school voluntarily (Carmody, 1999; Kelly, 1999; Serpell, 1993). This is further discussed in chapter two of this thesis.

A major social characteristic of Zambia is that it is multi-ethnic and by extension multi-cultural as well. There are seven major Zambian languages and seventy-three dialects. As a way of unifying all the seventy-three tribes, the country adopted a motto of one Zambia one nation as shown on the coat of arms on the Zambian flag:

² The challenges include use of traditional methods in agricultural, predicting weather, food preservations, prevention and treatment of diseases, family planning, communication, veterinary medicine and in maintaining law and order (Ngulube, 1989).

Picture 3 Coat of Arms of Zambia



Source: Coat of Arms of Zambia: (on line).

Before the arrival of early missionaries and colonialism, the area known as Zambia was home to a number of tribal kingdoms and among them were the *Barotse* kingdom of king *Lewanika*, the *Lunda* kingdom of *Mwata Kazembe* and the *Undi* kingdom of the Chewa people, to mention but a few. The *Undi* kingdom of the Chewa people was initially situated in the Eastern region of the country, but extending into Malawi and Mozambique (Langworthy, 1969; Mchombo, 2006). The *Undi* kingdom of the Chewa people is fully discussed in Chapter 4 of this thesis. Giving a contrast between the powers these traditional chiefs had before the missionaries and colonialists set foot on the African land and now, Neil (1965: 370) says:

It is hard for the reader today to think himself or herself back into the Africa of a century ago. The chieftainship has in most areas become an honorary or decorative function; the word of other authorities is law. The chief was omnipotent and the whole of African life revolved about him. The chief's word was law; he had the power of death and life; and though in many cases the elders were the repositories of the ancestral wisdom and the chiefs' power was not absolutely unlimited, the limits tended to be theoretical rather than effective.

Although the chiefs may have lost some power, to assume that they have become honorary or reduced to decorative power may not be correct. My argument is that the chiefs still wield a lot of power over their subjects and that this may explain why politicians go to them during election periods so that the chiefs can influence their subjects to vote for these individual politicians (see more examples of the chieftainship powers in chapter six). These kingdoms were well established with the chiefs in full control of everything. Commenting on African chiefs and the power they had, Neil (1965:370) further says:

The chiefs were the wise and prudent statesmen who held their people together and guided them through the difficult period of the revolution brought about by the coming of the white man. For example, unless the chief gave his approval, no white man could hope to take up residence in his territory

While it may be true that the majority of the pre-colonial African chiefs held their people together, there are also other contentious issues that have been raised against some of them. For example, the conduct of some African chiefs towards the slave traders and the early white settlers is a questionable one. There were some chiefs who allied themselves with the white man or Arab slave traders for either favours or protection against other rival chiefdoms. The policy of divide and rule used by the British colonial government (Kanu, 2007a) was based on the principle of favouring one group against the other. Though not documented, it is widely believed by many Africans that some chiefs were bribed with cloth to provide their own people as slaves, especially those deemed to be trouble makers. We can argue then that not all chiefs were wise and prudent. The *Bantu* migrations in central and Southern Africa to various parts within the region are attributed to the cruelty of some chiefs, such as *Shaka*, on their own people.

In Zambia, traditional leadership is hierarchically organized. There are eight paramount chiefs controlling vast areas and people. Below them are about fifty-six chiefs with powers of controlling a fair size of land and people. Under them are sub-chiefs that have smaller areas of control and less power (Banda, 2002). Annual ceremonies provide rare chances for the public to see the power and control these chiefs still have over their subjects. The chiefs' palaces conduct a number of court sessions on daily basis to solve domestic and land problems. Some towns fall under the chief's land and are named after the particular chief. For example, *Nkana Kitwe* and *Chingola*, on the Copper belt province of Zambia are named after the chiefs. There are still more than twenty annual traditional ceremonies in Zambia. These ceremonies manifest customs, traditions, social life, rituals, oral history, material and spiritual culture of the people. Some of these traditional ceremonies are shown below:

Picture 4 The Kuomboka Ceremony of the Lozi (Barotse) people of Paramount Chief Lewanika



Source: Kuomboka ceremony: (on line)

The picture above shows the *Lozi* people (formerly of the *Barotse* kingdom of King *Lewanika*) performing their annual ceremony of migration from the water logged *Lealui* to the dry lands known as *limulunga*. Other than just a migration, the ceremony provides the *Lozi* people an opportunity to show their culture to the outsiders.

Picture 5 :The Mutomboka Ceremony of the Lunda of Paramount Chief Mwata Kazembe

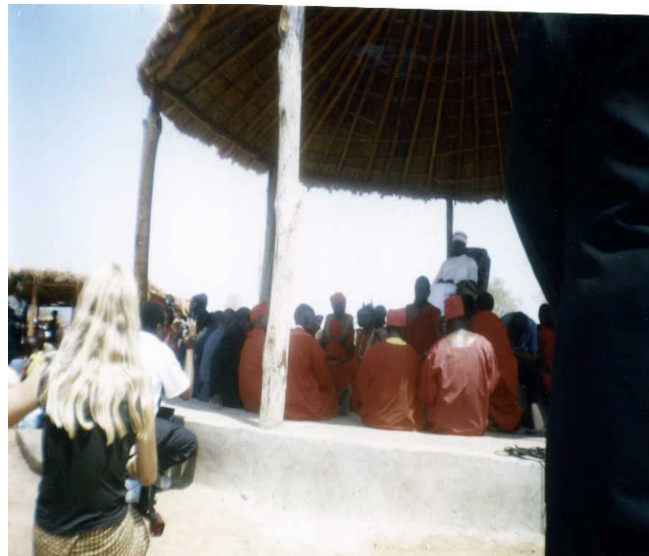


Source: Mutomboka ceremony: (on line).

The *Mutomboka* ceremony as pictured above takes place among the *Lunda* people in *Luapula* province of Zambia. Like the other ceremonies, you also see the culture of the people. The attire that both *Mwata Kazembe* and *Kalonga Gawa Undi* below and their sub chiefs are wearing could be a reminder of the influence the Arab slave traders had on the people. This aspect reflects what Jegede (1994) and Knijinik (1997)

seem to conclude when they say that in this highly transient global life style, it is not strange to acquire indigenous knowledge influenced by non-indigenous knowledge. This is also an indication that culture adopts new forms of knowledge and practices and integrates them in its mainstream (Bicker *et al.*, 2004; Sillitoe *et al.*, 2005) and it exists only in constant alteration in response to the meanings and demands of the emerging situations as suggested by Kanu (2007a).

Picture 6 Paramount **Kalonga Gawa Undi** with his sub-ordinate chiefs at **Kulamba Ceremony of the Chewa people**



Source: Assistant researcher at the 2005 Kulamba ceremony

The *Kulamba* ceremony of the Chewa people (formerly the *Undi* Kingdom of *Kalonga Gawa Undi*) is another annual traditional ceremony worthy of watching. During the ceremony, a narrator gives the history of the Chewa people. The activities that take place during these annual ceremonies could be response to the charge that the African tradition embedded in AIKS is disappearing and should not be referred to.

The diversity of ethnic groups and their chiefdoms includes the existence of several traditions and cultural practices. These could have either negative or positive implications on the education of children over the years. This research intends to investigate whether these traditions and practices could be hybridized with the current school curriculum. In the topic for this research "African Indigenous Knowledge Systems" (AIKS) is in quotation marks. This is because some scholars, particularly those from the West, consider AIKS a contested term. They argue that Africa has no hegemonic culture or body of knowledge as each group of people has its own and unique from all others (Makgoba *et al.*, 1998; Semali, 1999; Seepe, 2000; 2001) (See

critique to AIKS in chapter two). However, other scholars, both from the West (Freire, 1970; Chambers, 1979; Brock-Utne, 2000; Breidlid, 2007) and Africa (Ocitti, 1973; Odora, 2000; Ngulube, 1989; Semali, 1999; Omolewa, 2001; Seepe, 2000; Kanu, 2007a) have used the term 'AIKS' in many of their writings and do not seem to consider it contentious. Arguing from the African world view, Seepe (2000: on line) justifies the use of the term when he says:

The African Indigenous Knowledge Systems is a counter-hegemonic discourse in the context of African renaissance. This discourse is a reaction against a Western, colonial discourse that completely dismissed African indigenous knowledge systems, as they were posited in reductionist terms and relegated to the realm of insignificance.

Emeagwali (2003: on line) also supports Seepe (2000) when she says that:

The African Indigenous Knowledge Systems (AIKS) is a reaction to disinformation embedded in Eurocentric colonial and post-colonial education, including the selective omission of non-European achievements, inventions and technologies, the distortion of data, and several other strategies of colonization and recolonization.

I agree with the views expressed above and my argument is that to a large extent, these views show why the AIKS is used as an antonym of the Western Knowledge Systems (WKS) so much so that anything that is not European is African (See the following section and chapter two under the section 'what is AIKS').

Why the topic?

"Can anything good come from Nazareth?" This is a quotation from the Bible book of John 1:46 (Watchtower, 1984).

When Phillip, one of the disciples of Jesus Christ told Nathaniel that they had found the one whom Moses in the law and the prophets wrote about, Jesus, the son of Joseph from Nazareth, Nathaniel's quick answer is in the words above. As in the days of Jesus, there are so many Nathaniel-like people in our days asking if there is anything good that can be got from African Indigenous Knowledge Systems (AIKS). Many scholars, especially from the West seem to share this view about Indigenous Knowledge Systems (IKS) in general as explained by many authors (Warren *et al.*, 1995; Semali, 1999; Bicker *et al.*, 2004). Why my choice then?

My own personal history and experiences of living in a rural community may have influenced the choice of my research topic. In a rural community, acquisition of practical skills like hunting, trapping birds and other small wild animals for food,

constructing huts and granaries for maize storage and many others are much valued. A child who does not develop any of these skills is a laughing stock in the village and would be assigned a person to train him or her. Most learning we went through was task-based (Ngulube, 1989; Semali, 1999). I knew the art of trapping birds at the age of seven and this won me praise and gifts from my parents and other members of our community. Names of trees, plants, animals and insects, as well as the dangers and uses of each, were learnt when herding cattle or at maize fields with our parents. Some trees or roots would be identified by smell rather than sight. This is what Classen (1999) has reported happens elsewhere (see chapter four). The elders and sometimes even peers told us that certain types of birds and animals were not to be hunted. They would reveal to us that if hunters found two bucks fighting, they would kill only one and let the other one go. If the two animals were killed and news reached the village head or the chief, such a hunter would be made to pay a cow as punishment. Similarly, not all trees were to be cut. It was an offence to cut a tree that bears fruits or is used for medicine, while other trees like *msoro* would be preserved for divine purposes. This means that traditional checks and balances were instituted through a practice of rules and in some cases, a declaration of taboos (See Tables 3 and 4). Much of this information is not documented anywhere and could soon die with the passing of the older generation.

The notion here is that the *Chewa* people were able to control their hunting activities to allow nature to repair itself and avoid a depletion of animal species. This must have served to an extent as animal and environmental conservation. Tribal legends and proverbs (Mwale, 1973) were told and retold by the evening fireside as also alluded to by other scholars (Omolewa, 2001; Semali, 1999). Through them much of the cultural heritage of our tribe was kept alive. The word 'orphan' was never in our vocabulary as there was no one to merit that word. The family was my first world. All the older men in our community were my 'fathers', the women my 'mothers' and the girls and boys of my age my 'sisters' and 'brothers'. The family tree was wide but safe and accommodating. Little did I know that one day all the numerous 'fathers' and 'mothers' would wear euphemistic terms 'uncles' and 'aunts' respectively, that my family tree would dwindle to what is known as biological parents, sisters and brothers. Those without the so-called biological parents would further be qualified as either single or double orphans (See chapter six). It was this humble experience that led to

the development of my epistemological position and a respect for the *Chewa* AIKS. My argument is that the *Chewa* AIKS embraced the notion of providing education for all. Elders were not just teachers, but also mobile libraries and encyclopaedias, to be referred to by all (Frank, 1960; Ocitti, 1973; Clarke, 1978; 1979). This notion is supported by Ki-Zerbo (1990: 27) who says that "when an elder dies in Africa, it is a library that burns."

My education in the village began the day I was born and given a name, the name of my grand father who was a hunter. The term 'hunting' in the western context, has changed to 'poaching' when it comes to people doing it for survival and 'safari hunting' when it is others doing it for sport. In the *Chewa* AIKS, name giving has two significant reasons. The first reason is for identification and the other is a teaching point or a teaching aid. My grandfather used to hunt wild beasts in swampy areas. The wild beast is known as *Nkhonzi* in my mother tongue and a swampy area is known as *Dambo*. So he was known by the name of the animals he used to kill and the place he would go hunting. He was called *Nkhonzi Kudambo*, which literally means 'Wild beast at the swampy area.' All my father would do if I behaved not to his expectation was to point out the importance of the man whose name I was carrying. I would then be reminded that the name should never be put to shame. Note that a name would be withdrawn from you if you did not live by it. I was forced to change to a 'civilised' or 'new' name when I went to primary school to start my formal education as my given name was considered primitive. As a teacher, when I call out names in a class register I find that so many of my pupils have names that, in the context of the Chewa community, have no meanings at all. I read names like 'Spanner', 'Post it', 'Size', 'England', 'Cup', 'Envelope', 'Brush', 'Stamp', 'Syndicate' 'New house', 'Too much' and even 'Post office'. With the coming of cell phones with their new vocabularies, we are likely to have new names like 'Mobile', 'Voicemail', 'Motorola', 'Nokia' 'Talk time' and the like. Yes, they are really 'civilised English' names.

I recall vividly the many days my siblings and I would accompany our parents to the maize field. We would listen to stories and check for spider holes to see whether they had closed their outlets, which was an indication that it would rain that day. This would be confirmed by sounds made by some birds and the amount of dew present that day. The less the dew the more likely it would rain and vice versa. This was some kind of triangulation. The relationship between human beings, the environment and

the animal world was very strong (Vuolab, 2000). I recall how my father asked me to chase away a small bird that was sitting on the elephant grass near where we were weeding, singing what I thought was a beautiful song. I later learnt that in that song, the small bird was complaining about the weeds in the field. This is what prompted the chasing away of this small bird. That was a discouraging song. Then, the language was reinforced by the games we played with words through riddles, proverbs, and transpositions of syllables or songs. The riddles were to test our judgement, and myths to explain the origin of our tribe and the genesis of man (Omolewa, 2001; Semali, 1999). These were narrated with care and repetition. They were like lessons readily illustrated in simple personal life stories, recollections and memories (Wendland, 2004). These lessons offered us training in what I, as a teacher now, would consider as a complicated linguistic system and yet taught without a script. This is what Rogers (2003) describes as unconscious learning leading to tacit knowledge. This formed part of indigenous education, history, and one of the multiple ways of knowing things. This was the knowledge passed on from the generation of my grandparents and parents to us (Smith, 1934; Clarke; 1978; Smith, 1984). The lessons provided a powerful new sense of identity. Above all, it was education for all.

Then I went to a primary school. My parents made it clear to me that I needed to go to school if I were to find a job and look after them and myself in the future. I found this very confusing as there were already a good number of boys and girls in our village and even in the neighbouring villages, who went to school and reached Grade seven or even Form three but did not have jobs. They were even worse off compared to those who never went to school but looked after other people's cattle in the village and were given a cow as payment after seven years, the same seven years I would spend in a primary school. Coming out of school after seven years or more with no job prospects meant seven or more years wasted. I kept on telling myself that if such a situation befell me, I would have no job yet no cow to pay for dowry for my marriage. My hopes were that, at least, school would teach me some practical skills and farming techniques that would make me a better farmer than those in my village who never went to school.

To my surprise, I found that the harmony between what you learn at school and what you experience in everyday life at home was not only broken but also lost as observed by Serpell (1993) in his study of the significance of schooling among the Chewa

people. My struggle began when I was told I had to stand when talking to my teachers. This was a contradiction because when in the community, kneeling was the sign of respect and standing when talking to elders was a sign of rudeness. Speaking in my mother tongue, the language of my community, was a punishable offence³ as such languages were said to be primitive, which meant that everybody in my community was primitive. We were told to ask for permission in English to go and attend to a call of nature when in my community the only time you just disappear without telling anybody is when you want to answer to the call of nature. I do not need to explain what happened to me when that foreign expression of 'Please teacher, may I go to the toilet' was forgotten. I also learnt that while keeping quiet and looking down and listening when an elder is talking are ways of showing respect and signs of being attentive, they did not mean the same at school. The teacher would describe you as a passive learner and possibly dull. I also found it confusing to learn that asking and answering questions in class is a sign of being clever and intelligent when in my community asking questions when an elder is explaining things are signs of rudeness and an indication of lack of understanding.

When I went to secondary school, the contradictions I left at primary school followed me. I could see that the gap between community knowledge and school learning was becoming wider and wider. My parents, for example, were fond of using the Chewa expression *chuma chilli mnthaka*, which literally means 'wealth is in the soil'. The expression was a constant reminder to us on the importance of farming. Among the Chewa people, farming is the main occupation. At first I thought all the pupils, at my school, would do a subject related to farming- Agricultural science. To my surprise, this subject was optional. Pupils on punishment often attended to the small production unit garden we had. This went further to reinforce the already existing negative attitude towards Agricultural science as a subject and farming as an activity. The contents of the subjects were another source of contradictions. For example, one of the early lessons we had in Agricultural science was about the combustion system of a tractor, the tractor I have never used to date. The use of a plough, driven by oxen, was an everyday thing among my people. During holidays, my father would always be

³ At one time it was punishable offences for Welsh children to speak Welsh at school. (see Morgan et al., 2003).

angry with me for failing to drive the oxen properly when ploughing in our maize field.

"You are now in Grade 8 at secondary school, and you still do not know how to guide the oxen properly!" my father would exclaim at me.

"How do I tell him that we do not do such kind of things? Why do my parents think school should do everything for them?" I would ask myself.

My parents, along with those of my friends, did not know that learning how to plough with oxen was not part of our Agricultural science syllabus. We were learning 'progressive agriculture' of tractors used by commercial farmers and not 'retrogressive knowledge' of the plough and oxen used by peasant farmers. We were learning how to grow cash crops like sunflower, cotton, tobacco and the like. We were learning more about the rivers and mountains of Europe and America and little, if anything, about our own rivers and hills, from where we would fish and hunt, respectively, for our living (Nyerere, 1968, Warren *et al.*, 1995). This was confusing to me. The school and my immediate environment tended to pull in opposite directions, so to speak.

In a nutshell, I would say that these experiences have made me discover that there is a school culture and a village culture and that not all knowledge is knowledge; that the alternative knowledge to school knowledge is currently classified as ignorance. Now at my age, I can argue that the conquest of the mind through the advent of early missionary education and colonialism has had a forceful impact on Africa as a continent, Zambia as a country and the Chewa people as a tribe (Semali, 1995; 1999; Kanu, 2007a). There is still a widely held view that anything associated with African culture and hereditary values is pagan and thus backward (Keal, 2003; Odora, 1994). The impact has left a legacy that anything African is inferior to that with a European or English tag. In my village today, if a dog gave birth to four puppies and two looked better than the other, the better ones would be classified as *twa chizungu* (English breed) and the other miserable looking ones *twa chi firica* (the African breed). Even my fellow teachers teaching Zambian languages would rather be called 'language teachers' with an omission of 'Zambian' for fear of being laughed at by colleagues.

This struggle of trying to find parallels in my culture with what is being taught in the classroom at school is the struggle I would like to pursue in my research paper even at

this late hour in my life. My argument is not an appeal to an assumed “classy” past to which we should nostalgically return, a notion Kanu (2007a) also opposes. We can draw from the Chewa riddle that says, *tambala alila napenya kwao* (meaning the rooster cries while looking back to where it came from- home). The answer to this riddle is ‘a bunch of banana’ because it always boughs toward the tree where it originated from before the fruit matures. This is similar to the Ghanaian Akan concept of *sankofa* (meaning “return to the past to move forward”) which I have referred to in other chapters. My position is that there is need to re-think and re-appropriate some of the African indigenous knowledge values and social organisations (Kanu, 2007b) and integrate them into the formal school curriculum. That way school and community could have the same agenda of development and sing the same song, where the differences that may exist should be viewed by all stakeholders like the sopranos, basses and the tenors that all contribute to the production of a quality song, to be danced to by all, regardless of age, gender, disability, religious and economic status.

Research problem

The main focus of this research is to find out whether or not the African Indigenous Knowledge systems (AIKS) could be the missing link to the achievement of Education for All (EFA) goals. Particular reference is made to the Chewa people of Zambia.

Background to the study

Zambia, as a member of United Nations (UN) is a signatory to the 1948 Universal Declaration of Human rights. All the nations of the world declared that education, as an instrument of change, is a right for everyone. Individual member nations appear to have put in place various measures in regard to this human right (UN, 1948). However, this right has not yet been enjoyed by all in Zambia despite frantic efforts that have been put in place.

UNESCO (2006:1) report acknowledges that despite notable efforts by countries around the globe to ensure the right to education for all, the following realities persisted more than 40 years (1990) after that declaration:

- More than 100 million children, including at least 60 million girls, have no access to primary schooling;


- More than 960 million adults, two-thirds of whom are women, are illiterate, and functional illiteracy is a significant problem in all countries, industrialized and developing;
- More than one-third of the world's adults have no access to the printed knowledge, new skills and technologies that could improve the quality of their lives and help them shape, and adapt to, social and cultural change; and
- More than 100 million children and countless adults fail to complete basic education programs; millions more satisfy the attendance requirements but do not acquire essential knowledge and skills.

The 1990 World Conferences on Education for All in Jomtien, Thailand, was organised in response to this gloomy picture, as stated above. There was wide spread concern over the inadequacy and deterioration of the education system, as shown by the figures above. All in attendance at this conference agreed to take the necessary steps to universalise primary education and massively reduce illiteracy by 2000, as well as to:

- Expand early childhood education
- Improve learning achievement
- Reduce the male-female literacy gap
- Expand basic education opportunities for youth and adults
- Use all available communication channels to promote knowledge, skills and values for better living

In 2000, ten years after the Jomtien conference, Oxfam (2000:4) considered it a "lost decade" because there were still 125 million children who had never attended school and another 150 million children who would start school, but drop out before they could read or write. The Dakar Conference shifted the year of achieving the EFA goals to 2015 and put more emphasis on some issues like girls' education. This is reflected in the six EFA goals that the Conference adopted to reaffirm the 1990 Jomtien Conference:

Figure 1 Education for all goals

 THE SIX EFA GOALS
1. Expanding and improving comprehensively early childhood care and education, especially for vulnerable and disadvantaged children.
2. Ensuring that by 2015, all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete free and compulsory primary education of good quality.
3. Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programs.
4. Achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.
5. Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to, and achievement in, basic education of good quality.
6. Improving every aspect of quality of education, and ensuring excellence so that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

Source: UNESCO (2006).

The contentious issue above these goals is that they are expected to be achieved by all member states before 2015. UNESCO (2007) has acknowledged that measuring some of these goals, especially goal six, has been an illusive task. The consideration of these goals as universal is a contentious one considering that definitions of education (see chapter two), indicators and benchmarks of what is quality education are not universal but seem to vary from country to country (Muller, 2000) (See critique to EFA in chapter two).

Zambia, like many other developing countries, has failed to achieve these EFA goals (Oxfam, 2000) as reflected in various UNESCO annual reports since 2000. This has created a need to look for alternative ways of tackling the same problem of giving meaningful education for all. It is for this reason that this research tries to find out if formal school education could supplement each other with the Chewa African Indigenous Knowledge Systems (AIKS) to achieve EFA. Details of how EFA has performed at various levels since the Dakar Conference are further discussed in chapter two of this thesis.

The reasons why Zambia has not achieved any of the above goals could be many. However, quality, relevance and credibility of the education offered could be the main

ones as cited by many authors (Ngulube, 1989; Kelly, 1999; Serpell, 1993; UNESCO, 2000). Recent studies (Serpell, 1993; Kelly, 1999; MoE, 2005) show that failure to offer education relevant to the needs of the people and relevant to their immediate environment has also made many people lose faith in education and schooling altogether. Although reference is made to all the six EFA goals, this research focuses more on the quality of education. The argument advanced by this research is that anything perceived to be of poor quality and low value is often not appreciated. Education is no different. It is considered to be of little value by its recipients, confidence is small. Such a situation would have negative impacts on the achievement of all the six EFA goals. This may explain why the emphasis on quality education seems to permeate through the other five EFA goals. It is also observed in the UNESCO (2005:6) below:

Although the right to education has been reaffirmed on many occasions since the Universal Declaration of Human Rights was proclaimed in 1948, many international instruments are silent about the qualitative dimension of learning. Most recently, the United Nations Millennium Declaration, adopted in 2000, states that all children will be able to complete a full course of primary schooling by 2015 but makes no specific reference to its quality and yet achieving universal participation depends fundamentally upon the quality of education available.

This research is, therefore, an investigation of whether or not AIKS can enhance the achievement of EFA goals, especially in the area of quality education, if hybridized with the Western Knowledge System (WKS). WKS are forms of knowledge generated in schools, colleges, universities, research organisations and industrial firms. In this thesis the formal education system will loosely be referred to as WKS. The study has restricted itself to the Primary school sector, which is Grades 1 to 7.⁴ Particular reference is made to the forms of AIKS practised by the Chewa people of Eastern Province of Zambia. This research does not suggest a replacement of one system of education by the other. Rather it focuses on finding out ways and means in which, the AIKS and the WKS can complement each other to enhance access, quality, credibility and relevance of the education to be offered to all. Furthermore this research does not seek to make the case for AIKS as the panacea to all the problems EFA faces in implementing its goals nor does it suggest that WKS is incompatible with the EFA goals. On the contrary, both the WKS and AIKS are critical components

⁴ The classroom observations, teachers' interviews and AIKS check list were all limited to Grade 7, the last Grade of the current primary school education program.

in this quest. In short, this research does not in any way suggest a wholesale return to AIKS (See the concept *sankofa* in this chapter). It is for this reason that those theories and frameworks on the hybridization of AIKS and western knowledge are considered in this research (UNESCO- UNICEF, 1990). This is in line with the World Bank (2004) report on indigenous knowledge and science. The report acknowledges few key points that:

- Both indigenous knowledge and modern science are not really in competition or in conflict with each other but that each has some elements of the other.
- Very few, if any, serious scholars actually consider indigenous knowledge to be an exclusive alternative to modern science.
- The exclusive use of modern science is not enough for the complex tasks of achieving sustainable development in diverse cultural and ecological contexts.

We can conclude from such findings that AIKS could have something to offer to the formal schooling. A reflection and meditation on the characteristics and hybridization of some relevant and applicable principles with the formal school curricula might act as 'attractors' to children, parents and communities in general and enhance the achievement of EFA goals.

UNESCO (2005) says that in the many countries striving to guarantee all children the right to education, the focus on access often overshadows attention to quality of education. Yet quality determines how much and how well children learn and the extent to which their education translates into a range of personal, social and developmental benefits (Oduaran *et al.*, 2006). However, UNESCO (2007) report acknowledges that so many pupils leave school without mastering a minimum set of cognitive and non-cognitive skills, especially in Sub Saharan Africa.

This research aims at finding out whether there are some aspects in the *Chewa* AIKS that could be hybridised with the formal school curriculum to enhance the achievement of EFA goals (Ocitti, 1973; Odora, 1994; Semali *et al.*, 1994). A claim of this research is that its findings may have a multiplier effect, as they may apply to Malawi and Mozambique as well. Also, the methodological approach used by the Chewa people may apply to other indigenous people in Africa and possibly elsewhere in the world. All the Chewa people found in Malawi, Zambia and Mozambique constituted the large Undi kingdom, which was under the control of one paramount

chief Gawa Undi.⁵ The paramount chief was originally based in Mozambique at a place called Mano but later moved to Zambia. Details of the Chewa people are given later in chapter four of this research.

Through document analysis, this research intends to look at the two educational systems, the African Native Education and the European Education system, created by the British Colonial Government. The aim is to try and find out the principle rather than the motive⁶ behind the establishment of the African Native Education by the colonialists. Could it be that it was one way of attending to the demands of indigenous education without necessarily mentioning the term "indigenous"? How inclusive were the two education systems employed then? This research intends to document some sayings, proverbs, beliefs, taboos and norms of the Chewa people and try to analyse them thematically.⁷ Knowledge of such documentation will be very useful and a point of reference in future research. To education policy makers, who are currently trying to come up with strategies to meet the EFA demands, findings from this study could offer additional resource material for reference. The research makes an attempt to dig further beyond the surface and folk culture (Barnhardt *et al.*, 2005) of the *Chewa* AIKS, with the help of the following research questions:

Main research question

Can the hybridization of Chewa AIKS and the formal school curriculum enhance the achievement of Education for All (EFA) among the Chewa people in Zambia?

Subsidiary questions

- Can Zambia achieve EFA goals by 2015?
- What challenges has Zambia faced with the implementation of EFA goals?
- Do the Chewa people and their AIKS support EFA?

⁵ Undi is the title for the Chewa paramount chief and Gawa means the one who apportions things like land and authority to subordinate chiefs and subjects (Mwale, 1973).

⁶ The motive behind the two systems of education was to give superior education to the whites and inferior one to the blacks (Mwanakatwe, 1974).

⁷ These will be analysed and categorised under themes like, veterinary science, meteorology, botany, morals, survival and practical skills, law (how to settle dispute), mathematics, theology, herbal Medicine, geography, ecology and zoology, character formation (patience, obedience, endurance, respect for authority etc) social psychology (greetings, questioning techniques) preservation of environment and prevention of diseases.

- What are some of the indigenous forms of learning that emerge from the Chewa AIKS?
- How organised and inclusive is the Chewa AIKS to enhance the achievement of the EFA goals?
- How is knowledge accumulated, stored, transmitted and assessed in the Chewa AIKS? Is that knowledge static or responsive to change?
- How can the Chewa AIKS be hybridized with the formal school curriculum?
- In what other ways can the Chewa AIKS be used?
- Are there perceived barriers between school and community that the hybridization of the Chewa AIKS and formal school could try to remedy to enhance the achievement of EFA goals?
- What role can formal education stakeholders (Ministry of Education, Universities, National Curriculum Development Centre (CDC), Community schools management, Technical and Vocational Education Training Authority (TEVATA), Examination Council of Zambia (ECZ), UNESCO, Lusaka office, and NGOs on education projects play in the mainstreaming of AIKS into the school curricula?
- What roles can the Chewa traditional chiefs, local leaders, elders, and others perceived to be custodians of the Chewa AIKS such as traditional healers and traditional birth attendants (TBA), play in the designing and implementation of school curricula in their areas?
- Do children bring to classroom any aspect of the Chewa AIKS?
- If so, do teachers make use of it during their lesson preparation and presentation in various subjects?
- What could be the possible frameworks of the hybridization of the Chewa AIKS and the formal school curriculum?
- What factors can affect the hybridization of the Chewa AIKS and the formal school curriculum?

Structure of the thesis

Chapter 2 discusses EFA in the context of Zambia. The chapter presents the educational context before, during and after colonialism. The focus of the chapter is on whether or not the concept of inclusive education was given attention during those stated periods. Since the people had their form of knowledge system before the European Missionaries introduced formal schools, the chapter tries to establish the position of AIKS in these developments and how this may have affected the provision of quality education for all. It is in this context that the chapter gives a global, African and Zambian overview of the background and development of EFA. The views of the respondents on the concept of EFA are discussed as well. Finally, a critique to the

EFA and the formal schooling is presented. The critique forms the basis and justification for the investigation into AIKS. The chapter has looked at two attempts made by two African countries, Zambia and Tanzania to adapt the formal school curricula to local needs. In the case of Zambia, it was Education for Development (EFD) (Kaunda, 1972) while for Tanzania it was Education for Self-Reliance (ESR) (Nyerere, 1968). Challenges faced in the two attempts have been highlighted in this chapter for the benefit of other attempts on the subject.

Chapter 3 focuses on Indigenous Knowledge Systems (IKS), Local Knowledge (LK) and African Indigenous Knowledge Systems (AIKS). An effort is made to look at writings and specific research studies on IKS from other parts of the world, Africa and Zambia. Studies and writings on the Chewa people, in particular, are also cited in this chapter. This is to highlight the gap that may exist in this area, which this research tries to fill. The chapter further presents the theoretical frameworks and theories that are guiding this study.

Chapter 4 gives an anthropological account of the Chewa people. This is done by looking at their origin, traditional hierarchy, and the organizational structure of their AIKS, the *Kulamba* annual ceremony, their 'secret schools' and reaction to the introduction of Western Knowledge Systems (WKS) through formal schooling. The chapter further gives the overall reaction of the Chewa people to this new concept of school as introduced by the missionaries. The views of the Chewa people on the provision of education for all are also analysed in the chapter. The role the *Nyau* masks play in this form of resistance to the colonial government, missionaries and even to the *Ngoni* invaders is discussed with the use of pictures, where possible. Areas showing some elements of integration of ideas between the formal schools and the *Chewa* secret schools or lack of it are highlighted in various segments of this chapter.

Chapter 5 explains the research methodology and methods that are used to investigate if AIKS can enhance the achievement of EFA goals. The first part gives a brief review of the qualitative research paradigm, the research methods and the rationale behind the selection of these approaches, methods and techniques. The second part presents information about the research sample, the construction and administration of the research tools. Finally, reliability, validity, ethical issues and limitations of the study are discussed followed by a conclusion.

Chapter 6 presents research findings, discussions and analysis using the thematic approach. The themes are derived from the key ideas from the focus group discussions, both structured and unstructured interviews, participant observations, document analysis and the AIKS check list exercise given to Grade seven pupils in four sampled government and community schools. The findings are analysed in line with the main aim of the study and the research questions posed. The chapter tries to underline the overall objective of this research, which is to see if the Chewa AIKS could be hybridized with the formal primary school curriculum and enhance the achievement of the EFA goals. Implications of the hybridization of AIKS and the school curriculum are presented in this chapter. Areas that require more research are highlighted, but presented in the concluding chapter

Chapter 7 presents a conclusion and recommendations. Firstly, the chapter presents a summary of the findings. Included in this chapter are the self- reflection of the research process, claim for originality and contribution of this thesis to new knowledge and areas recommended for further research. The chapter ends with the researcher's final summary statements on the research and the six EFA goals and the contradictions and dilemmas involving the Chewa AIKS and EFA that need attention in future research works on the subject.

CHAPTER TWO

EDUCATION FOR ALL IN THE CONTEXT OF ZAMBIAN EDUCATION AND CULTURE

Introduction

What is broad-based Education?

Some animals in a forest decided to start a school. The students included a bird, a squirrel, a fish, a dog, a rabbit and a mentally retarded eel. A board was formed and it was decided that flying, tree climbing, swimming and burrowing would be part of the curriculum in order to give a broad-based education. All animals were required to take all subjects. The bird was excellent at flying and was getting As but when it came to burrowing, it kept breaking its beak and wings and started failing. Pretty soon, it started making Cs in flying and of course in tree climbing and swimming it was getting Fs. The Squirrel was great at tree climbing and was getting As, but failing in swimming. The fish was the best swimmer but couldn't get out of water and got Fs in everything else. The dog did not join the school, stopped paying taxes and kept fighting with the administration to include barking as part of the curriculum. The rabbit got As in burrowing but tree climbing was a real problem. It kept falling and landing on its head, suffered brain damage, and soon couldn't even burrow properly and got Cs in that too. The mentally retarded eel, who did everything half as well, became the valedictorian of the class. The board was happy because everybody was getting a broad-based education (Khera, 2004:23).

This chapter gives a global, African, and Zambian picture of where Education for All (EFA) stands after so many years of implementation. The idea behind such an approach is to see how Zambia features in relations to other countries worldwide. Firstly, the chapter presents various forms of education. This is later followed by the education context in Zambia before, during and after colonialism. In a nutshell, the chapter aims at establishing the positions of inclusive or broad-based education and AIKS in these educational developments (Mwanakatwe, 1974; Snelson, 1974). The chapter sheds some light on how issues of access to education have been balanced with relevance, credibility, quality and gender in line with EFA requirements. Additionally the chapter suggests that the low levels of literacy (reading and writing) especially in developing countries, made world leaders call for the Jomtien Conference on EFA in 1990 to address the problem. Note that indigenous literacies, learnt informally, were not taken into account at this conference. In order to be more focused, the chapter looks at EFA from three different perspectives namely:

- Global
- African
- Zambian

Looking at EFA from various perspectives offers opportunities to see if there are other knowledge systems that individual countries, with unique cultural, economic, social and spiritual backgrounds, can employ. There are also barriers or successes to the implementations of the EFA goals that could be learnt or avoided. It is in this context that this research tries to see if AIKS can be an alternative factor that may exert either positive or negative impacts on the implementation and fulfilment of these EFA goals. Finally, the chapter ends with a general critique of EFA, its implementation and a conclusion to the chapter. It is this critique that opens a door to the discussion on AIKS as a possible aspect that can be included in the traditional formal school model through hybridization of the two.

Different Forms of Education

Education is one term with a number of meanings (Barrow *et al.*, 1978; Carmody, 2004) and care is needed when discussing it. In appreciating the gravity of this problem, Rogers (2003:4) acknowledges the dilemma many writers have found themselves in with the term 'education' to an extent that some decide to avoid the use of it altogether:

I appreciate the reason why so many writers wish to get away from using the term 'education' and replace it with 'learning'.

It would be futile for a researcher discussing Education for All (EFA) to avoid discussing the persistent confusion of education with schooling, learning, and literacy/illiteracy. The following are some of the definitions that various writers have given. Effort has been made to look at how these definitions have a bearing on terms like schooling, learning, and literacy and finally on EFA as a program.

Sample definitions of education

We infer that education is the process of bringing up children by adult members of the family and the society, a process of rearing children, a process of guiding, directing and educating children (Msango *et al.*, 2000:19) [Education as a process].

In today's world, education has come to be linked with economic progress, transmission of culture from one generation to another, as well as the development of intelligence (Carmody, 2004:X) [Objectives and purposes of education].

Educated persons are those who can choose wisely and courageously under any circumstances. If they have the ability to choose between virtuousness and vulgarities, regardless of the academic degrees they have, then they are educated (Khera, 2004:22) [Outcomes or product of education].

To be educated is not to have arrived at a destination; it is to travel with a different view (Peters, 1973:107) [Education as a system].

Education refers to a sum-total of structures [or systems], whether in a country or group of countries, or at a particular time, whose purpose is to educate pupils, which function according to more or less precise rules (Mialaret, 1985:14) [Education as a system].

Looking at the above definitions, one can see a deliberate effort by various writers to avoid defining what education is, as a term. Rather, they define the term from the point of view of its outcomes, as a process, a system and from its objectives or purposes (See the parenthesis to the quotations above). I consider these to be working definitions, though limited. A number of observations can be made from these definitions. For example, the first definition uses age as a determining factor to select who should receive that education. The assumption given is that education is for the young ones alone, reducing Education for All (EFA) to Education for All the Children (EFAC) (Rogers, 2003). Using the terms in that definition, one can argue that we all get 'directed' and 'guided' throughout our life time. Therefore, such a definition seems to be against the concept of lifelong education. This definition seems to be influenced by the Latin derivatives as explained by Msango *et al.*, (2000: 18):

The word education is derived from two Latin words. The first one is 'educare (educi, educare, educavi, educatum), a first conjugation verb meaning 'to bring up' 'to rear', to 'guide', to 'direct', to 'educate' to 'foster' and the second one is 'educere' meaning 'to draw out or 'to develop.'

The second definition seems to look at education from the point of view of a spectator pointing to the functions or effects of education in a social or economic system. Peters (1973) argues that this is like looking at a medical doctor's job as mainly to increase the population or ensure employment to those who make medicine bottles. Generally the definitions above can help us to see that education and schooling are not the same. Education goes on throughout life, from the cradle to the grave. It embraces much more than the conventional academic skills and subject matter. It also includes many other things such as the acquisition of occupational, household skills and even the formation of attitudes (Kelly, 1999). This is what Msango *et al.*, (2000: 20) try to elaborate:

Education covers all aspects of training and initiation into the life of society into which one has been born to live. Schooling, on the other hand, covers only the literacy aspects of training. It deals primarily with literacy and numeracy and the acquisition of knowledge in such disciplines as science, literature, geography, history etc. We learn to read and write and study various subjects in schools, but we are

educated in the wider society. The school is only part of that society. Education is therefore bigger than schooling.

I do agree with this definition of education because it incorporates all the processes of bringing up children to adulthood and drawing out or developing their potential so that they are able to contribute to the community. However, we can argue that many people who did not go to formal schools do not consider themselves educated (See chapter six). Such ones would disagree with what they call real meaning of education in a Community College in Tanzania as reported by Burford *et al.*, (2003: on line):

Learning to hunt wild game or herd livestock, prepare food, weave cloth, search for wild honey or distinguish medical plants from poisonous ones, is arguably closer to the true meaning of 'education' than learning to make and interpret marks on paper.

The last definition (Mialaret, 1985) is cardinal to this study because it fits the UNESCO definition of education as "an organized and sustained communication system designed to bring about learning" (UNESCO, 1976:2-3). Here, education is considered as something that goes on only for a small period of one's life and in an institution like school. The main limitation of this definition is that it refers principally to formal education (see critique to EFA and formal schooling in this chapter).

On literacy, the views above also show that the definition of 'literacy;' also largely depends on the relationship between 'schooling' and 'education'. In the situation where literacy means the knowledge of the English alphabets taught in schools, (Academic literacy) an impression created now is that whoever did not go to school has no education. In a similar way 'learning' is also considered to be closely related to 'education' to an extent that some people think all the things we learn are education and that we get education through learning in schools. Showing the difference between the two terms, Rogers (2003:4) puts it this way:

Of course, education and learning are inextricably connected, but just as flour and bread are related though not all flour is bread, so education and learning are related. Education must always include learning but not all learning is education; education is moulded out of learning by some agency.

So some confusion has been created where 'education,' 'literacy,' 'learning' and 'schooling' seem to be confined to schooling education. Smith (1934:319) believes that this confusion has given rise to non-school forms of education being given other terms like 'adult literacy.' That may explain why some writers like Graham-Brown

(1991:1) describes adult literacy as “a convenient hook to hang what are cheaper forms of education provision.”

In *Chichewa*, also known as *Chinyanja*, the language for the Chewa people, the term *Maphunziro* (*Education*) can be used to mean ‘education,’ ‘schooling,’ ‘learning/teaching’ and even ‘literacy’, depending on the context. The terms above are all derived from the same stem *phunzir-a* as in *Ku-phunzir-a kulemba ndi kuweleng-a* (learning how to read and write); *phunzir-a* (to learn); *kuphunzira ku sikulu* (**Learning** at school); *Ma-phunzi-ro ya kusukulu* (school education) The Chewa term ‘*Maphunziro*’ is also used to mean ‘teaching’ or even ‘lesson’. E.g. *Phunzir-o* (Lesson) and ‘*aphunz-itsa*’ (He or she is teaching). In such situations, school is taken as the only place where ‘education,’ ‘schooling,’ ‘learning,’ ‘teaching’ and ‘literacy’ take place and whoever does not go through the four walls of school is not educated, not a learned person and a person with no literacy. The other Chewa expressions used to refer to a person who is illiterate or with no literacy are *mbuli* or *umbuli* or ‘*osapenya*’, which literally means an ignorant person or ‘one without sight.’ respectively. I think this is a misrepresentation of the term ‘literacy’; and some writers (Banda, 2003; Street, 2000; 1995) have argued that such thoughts could be influenced by modern schooling discourses of literacy which limit and represent it as a set of functional skills, the acquisition of which will improve people’s cognitive functioning and give them chances to master logical thought and meta-linguistic awareness so that they qualify for jobs and economic success. What they propose instead is to consider literacy as a social practice (Gee, 2000; Street, 2001) which permeates all the people’s aspects of life. Above all, literacy is embedded in the activities of people’s ordinary lives whether or not they regularly read books or do much writing (Barton, 1999).

However, the Chewa people still distinguish between formal schooling (*Maphunziro ya kusukulu*) and the Chewa AIKS (*Maphunziro or mwambo wa Chichewa*). Sometimes the Chewa AIKS is also called *Mwambo wa chifilika wa a Chewa*, which means ‘the African cultural traditions of the Chewa people. This means that among the Chewa people the terms ‘*mwambo*’ (culture) and ‘*Maphunziro*’ (education) are used interchangeably. Rather than saying ‘*Maphunziro ya chifilika ya a Chewa*’ (African education for the Chewa people), what is often used is *mwambo wa chifilika wa a Chewa*’, instead. Things covered under *mwambo* include norms, values and traditions character building, practical and life skills, respect for authority, sexual

education endurance and community participation. I agree with Kanu (2007a) who holds that these aspects of AIKS are not part of the formal schooling but children acquire them through informal education. When a child starts formal schooling at the age of seven, much time is spent at school. In situations like this, it is as if schooling education (*Maphunziro ya kusukulu*) has interfered with the Chewa AIKS (*Mwambo wa Chichewa*). Such views find support in what Msango *et al.*, (2000:21) say:

Schooling can interrupt a person's education, as it did in the case of Sir George Bernard of the United Kingdom who complained that he did not see the relevance of learning how to define *Mensa* (Table) to his overall education. The time he spent in the school, he argued, could have been more profitably used in learning certain other aspects of the society's culture. So we see many of us who know how to read and write and we are good in a variety of school subjects are not really educated; while those who have never been to school at all are more and better educated than most of us are.

Rather than rendering the formal schooling meaningless, as suggested in the quotation above, I would argue that it is the hybrid of formal schooling and the society's culture that would have been of benefit. Various writers (Coombs *et al.*, 1974; Coombs, 1968; 1975; 1989; Lungwangwa, 1985; Kelly, 1999; Msango *et al.*, 2000; Rogers, 2003; Carmody, 2004) have identified different kinds of learning that form part of education that vary in many aspects such as depth and complexity, in the time, effort and maturity required to attain them; specificity and transferability to new situations and many others. In this chapter efforts have been made to look at three categories of these forms of education. These are (1) informal, (2) non-formal and (3) formalised education. The reason behind looking at the three categories of education is to try and establish if there is overlap and some degree of interaction between them as suggested by some authors (Illeris, 2003; Bhola, 2004; Rogers, 2004b; Duke, 2004a).

Informal Education

Human history testifies that human beings are a learning species (Rogers, 2003; Duke, 2004b). There is always some kind of learning going on. One of the forms of education that provides some learning is informal education. Rogers (2003) seems to describe informal learning as acquisition learning or "controlled, individualised, purposeful and assisted learning, where learners learn what they want for as long as they want and stop when they want" (Rogers, 2004a: on line). Describing acquisition learning, Rogers (2003:17-18) argues that:

Most of the learning we do is acquisition learning, that traditional life-long cultural learning takes place in societies regardless of its inscription in texts. This kind of learning is voluntary or within the perimeters of a task. The learning is concrete, immediate, and confined to a specific activity.

One characteristic of informal education is that knowledge is not strictly divided or partitioned into diverse subjects as the case is with formal education. Informal education (IE) refers to the process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and the educative influences and resources in his or her environment. Kelly (1999:9) holds that:

Through informal education a child acquires a substantial vocabulary before going to school, a daughter learns child care and cooking from helping and observing her mother, a son picks up occupational skills from his father, and children and adolescents learn from their peers.

Although it is said to be unorganized, IE unquestionably accounts for a very high proportion of all that any person- even a highly schooled one- accumulates in a lifetime (Kelly, 1999; Rogers, 2003). African Indigenous Knowledge Systems (AIKS) seem to have a lot to do with informal education. No wonder some writers treat AIKS as if it were only operating within the boundaries of informal education (See chapters three and four).

Non-formal education

Non- Formal Education (NFE) is both organised and semi-structured education. Even when it is organized, it does not form a part of the established mainstream of education, which is hierarchically organized, in a rigid system of primary, secondary and university education (Whipple, 1957). It operates outside the regular structures of the formal education system (Kassam, 1978; Rogers, 2003). Coombs *et al.*, (1974:8) also define NFE as:

Any organised, systematic, educational activity, carried on outside the framework of the formal system, to provide selected types of learning to particular subgroups in the population, adults, children [unemployed, employed, illiterate, literate, rural, urban, street kids, out of school youths, orphans]. Thus defined non-formal education includes, for example, agricultural extension, and farmer training programs, adult literacy programs, occupational skill training given outside the formal system, youth clubs with substantial educational purposes and various community programs of instruction in health, nutrition, family planning and cooperatives.

Zambia has had a long history of Non-Formal Education (NFE), which has existed parallel to the formal system. Carmody (2004:68) acknowledges that from the arrival of the missionaries in 1883, non-formal education, while not identified, existed:

There were clearly a number of non-formal education practices which were carried out with the general provision of education literacy work, village improvement, training in literacy trades and village crafts and the work of the Barotse National School.

Some of these activities stated in the quotation above were conducted in adult education programs as well. Missionary education placed emphasis on non-formal education centres for elementary industrial training. The colonial government also created community-training centres for NFE. The trainings in these centres focused on mass literacy, leadership, vocational training in local skills, health education and traditional skills (Mumba, 2003).

To date, NFE still denotes all forms of education that are offered outside the formal school system. Kelly (1999) who has followed the development of education in Zambia, describes NFE as:

Any organized activity outside the established formal system that is intended to serve identifiable learning objectives of school equivalency programs to provide a "second chance" for those who are missing schooling or dropped out early; such as occupational training for adolescents in agriculture and construction (Kelly, 1999:9).

We can argue that while this definition cites good examples of NFE, it endorses the wrong notion that NFE is of second class (Bhola, 2004; Knoli, 2004). Rogers (2004a: on line) definition of NFE seems to be more precise, though lacks examples:

When we step into a pre-existing learning program but mould it to our own circumstances, we are engaged in non-formal education.

My argument is that NFE should be moulded on the circumstances and needs of learners, covering contextualised and participatory educational activities as suggested by some authors (Wallis, 1996; Duke, 2004a; Rogers, 2004b).

Formalized education

Formalized education refers to the hierarchically structured, chronologically graded educational system. This is more concerned with general principles and has a component of dependency. The material is sequenced, simplified and systematized. It is based on working memory (Memory based on the performance of some task) and not storage memory (Deliberate storage of memory). According to Rogers (2004a: on line):

When we [learners] surrender our autonomy and join a program and accept its externally imposed discipline, we are immersed in formal education.

Details of the general characteristics of three forms of education are given in the figure below:

Figure 2 Different forms of education

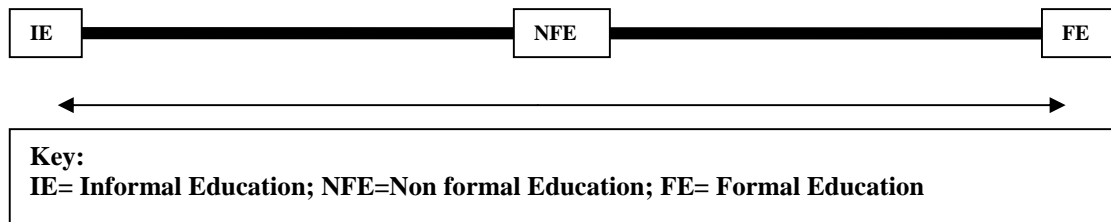
INFORMAL EDUCATION (IE)	NON-FORMAL EDUCATION (NFE)	FORMAL EDUCATION (FE)
<ol style="list-style-type: none"> 1. Silent learning that takes place in society. 2. Learning is concrete, immediate, and confined to a specific activity. 3. Learning is task or problem oriented. 4. Learners use tools, symbols, and models that are culturally developed and transmitted. 5. Does not see knowledge as strictly divided into disciplines. 6. Self-directed process. 7. Learner acts and reacts to it as a whole person 8. Life-long learning where an individual cultivates values, develop skills and acquire knowledge from daily experiences while using resources from one's environment. 9. Learning from family, peer, neighbours, work, and community. 10. Acquired learning. 	<ol style="list-style-type: none"> 1. Organised and semi-structured education. 2. Not hierarchically organised into rigid system of primary, secondary and university education, but operates outside the regular structures of the formal education. 3. Often follows community-based approaches. 4. Suitable for selected types of learning to various groups of people. 5. An alternative path to provide life-long education, ensure entrepreneurship and employment. 6. Offers opportunities to all categories of people 7. Not confined within a fixed framework of time and place. 8. Looks after a great variety of learning needs of different sub groups 9. Brings education opportunities to place of work, community, village, urban and rural, unemployed and employed 10. Brings 'school' to the community and not always taking people from community to school. 	<ol style="list-style-type: none"> 1. It is planned, and compartmentalized. 2. Follows a rigid curriculum for easy mastery. 3. It is content-oriented rather than process or problem oriented. 4. Has a component of dependency involved. 5. The material is sequenced, and systematised. 6. Based on indirect experience with externally set outcomes and standards. 7. Uses working memory (based on performance of some task) and not storage memory (deliberate storage of memory). 8. Learning that has been constructed by others for the purpose of consciously assisting learning. 9. It is largely controlled. 10. Rules are learnt first and practised later.

Source: Adapted from Coombs (1968; 1989) & Rogers (2003).

It is with such views that Rogers (2003) suggests that there is a continuum of learning, based on a mix of different forms of education moving along the continuum in both directions. He argues that most educational programs lie somewhere between two extremes- Informal Education (IE) and Formal Education (FE). Although learning takes place at different points along this continuum, much of it is informally learnt and often unconsciously (Rogers, 2004b). The problem Rogers (2004a) identifies is that currently the term Non-Formal Education (NFE) (that is everything that is not formal) is used to cover what he calls 'flexible schooling' (that is the standardised

elements common to all learning groups) and 'participatory education' (that is schooling made flexible to the local group concerned e.g. time and location of meeting). My argument is that while drawing the distinction between these forms of education is vital (Rogers, 2004b) it is the extension of the continuum to include other forms of education, like participatory education, that should be emphasised.

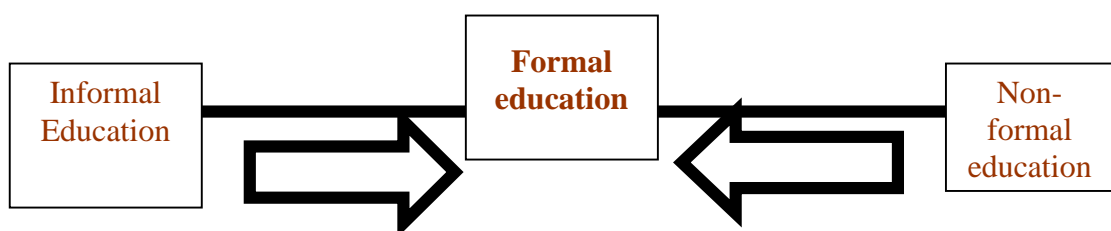
Figure 3: The Continuum of Education.



Source: Adapted from Rogers (2004b).

We could argue here that currently these different forms of education are not moving along the continuum in both directions as suggested in Figure 3. The formal education is perceived by many people to be the provider of benefits and of higher status so much so that both informal and non-formal forms of education seem to be coming from the opposite directions striving to reach the perceived centre of everything –the formal education (see Figure 4). Some of those rich in informal education but did not go to formal schools consider themselves disadvantaged and unlettered, whereas those doing some non formal education programs would like to tailor their programs not according to their needs but towards those of formal education. Such perceptions have created an impression that the informal and non-formal forms of education should always move towards formal education to legitimize themselves as I have illustrated below:

Figure 4 The Perceived monopoly and supremacy of Formal Education



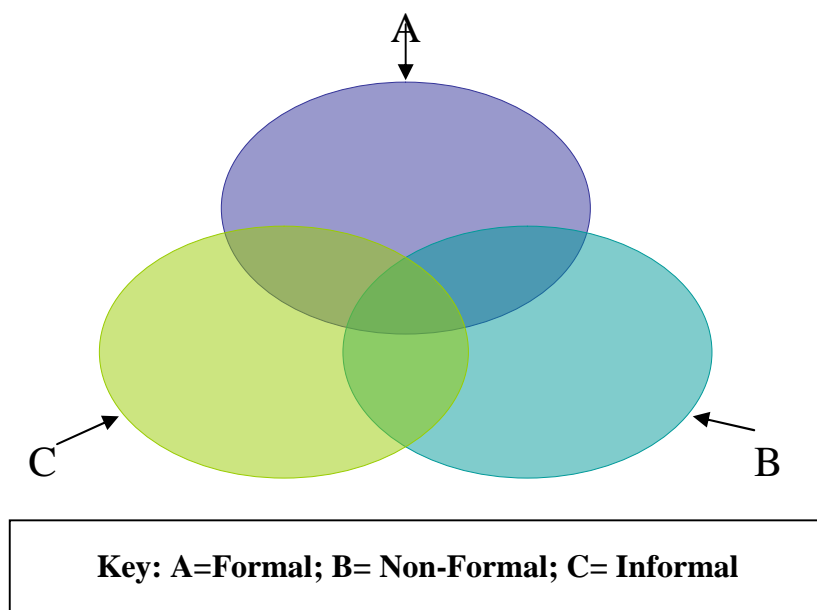
Some writers (Mumba, 2002; Rogers, 2003), seem to share the common view that Kelly (1999; 10) advances concerning the three forms of education:

In the broad conceptual framework of a 'lifelong educational system'—a system that should ultimately provide every individual with a flexible and diversified range of useful learning options throughout his or her life—formal, non-formal and informal education are clearly complementary and mutually reinforcing elements.

The Chewa AIKS, like other African Indigenous Knowledge Systems (AIKS) in general, is considered to be informal. However, there seem to be a number of deliberate and formal programs in the *Nyau* dance for boys and the *Chinamwali* initiation ceremony for girls who have reached puberty. The programs designed to inculcate some skills and traditional wisdom of the Chewa people into the new generation are so formal that it was no wonder that the early missionaries called both *Nyau* and *Chinamwali* 'secret schools' (These are discussed in chapter four). Much of what goes on in the Chewa AIKS is conscious learning based on apprenticeship principles (See chapter 4).

My argument is that an ideal situation would be for the three forms of education to complement and mutually reinforce one another. Teachers could include in their lessons the informal knowledge pupils bring along to the classroom. The non-formal education can borrow a lot of teaching and learning methods from the informal education e.g. use of songs, games, play etc. A number of practical and occupational skills embedded in the informal education could be included in the formalized learning and use the task-based learning and assessment methods that are commonly used in the informal learning. People with special skills learned through informal education could be used on apprenticeship basis in both formal and non-formal programs. That way, there would always be an intersection between the three forms of education as they complement one another. This could be another form of partnership for EFA (Draxler, 2008). The figure below shows the perceived ideal picture of the three forms of education co-existing:

Figure 5 Complementary Forms of education



Before Colonialism (1883 -1924)

The British South Africa Company (B. S. A. C) administered this land (now Zambia) between 1883 and 1924. The Company had no interest in the financing and provision of any form of education to the local people but allowed the missionaries to do so. We can argue that at this time traditional African societies had their own education identities established long before they were exposed to the European formal education influences. These structures were dismantled (Kanu, 2007a) when various missions took up the challenge of providing what Bennett (1993) calls the traditional school model. Many authors and educationists (Frank, 1960; Odora, 1994; Kelly, 1994; Thompson, 1994; Kanu, 2007a) suggest that the formal schooling introduced by the European missionaries was responsible for the disintegration of the social structures that the AIKS had established for the continued survival of African societies. We can argue that a dual system of AIKS and formal school system as in figure 10 never materialized. The missionaries aimed at systematically and subtly do away with the AIKS:

A characteristic of the traditional, centralized primary school system was to isolate children from parents and local communities in order to socialize them in the national culture. Although parents and local communities were eager to send their children to school, they were not encouraged to be active participants in the process (Bennett, 1993:6).

Commenting on the motive and the driving force behind the missionary education Kallaway (2006:5) holds that:

The European and the North American mission churches in the nineteenth century had a focus that was essentially evangelical and concerned with conversion experiences and increasing the size of the "flock". "Civilizing the natives" to conform to Western ideas of social life and morality was also of significance. Otherwise interpreted Christian education at this time was in part an ideological aspect of imperialism through which indigenous peoples were introduced to western languages, culture and scientific knowledge, and a participation in the capitalist free market of trade and industry.

These views above suggest that schools were an integral part of missionary work (Mwanakatwe, 1974; Manchishi, 1996). The missionaries were motivated to give formal education (literacy, numeracy) so that people could read the Bible (evangelisation) and spread the gospel message to others. It can be argued that the missionaries placed their main hope for stable converts to christianity on all the young and not necessarily education to all (Tiberondwa, 1978; Thompson, 1994; Carmody, 1999). Those children whose parents were not interested in the new faith were easily excluded from the educational arena. It has been reported that, some missions also wanted to introduce to their school curriculum, agricultural; carpentry; black-smithing and other skills that would help people raise their standards of living (Mwanakatwe, 1974; Snelson, 1974; Kelly, 1999; Kallaway, 2006).

The notion that missions introduced agricultural, carpentry, black smithing and other skills to the pupils through the school curriculum is a contentious one and of great interest to this research. It can be argued that they introduced into the school curriculum what may have already been known to the pupils through the informal education they got in their early childhood education from their families and communities. To suggest otherwise would be as misleading as the common saying in history lessons that Dr David Livingstone discovered Victoria Falls⁸ when the truth is that he was taken there by the local people, who even had a local name for the falls, *Mosio-ntunya*, which, in English, means 'the smoke that thunders'. The argument is that these practical skills were already embedded in AIKS, which missionaries did not just ignore but also aimed at uprooting completely as it was a symbol of evil. Neil (1965: 355) holds that:

⁸ Victoria Falls are one of the Seven Wonders of the World. The falls are on the river Zambezi in Zambia from which the country's name comes from.

Missionaries have often been accused of destroying simple peoples by changing their age-long customs and introducing such purely western habits as (changing names) wearing clothes.

It has been argued in other quarters that the missionaries introduced those practical skills to give those who came to their schools advantages over the rest. It was some kind of a bribe (Rogers, 2004b).

During Colonialism (1924- 1963)

One notable event that took place during this period was the work done by the Phelps-Stokes Fund. This Fund was set up in New York under the will of Miss Phelps-Stokes to further the education of Negroes both in America and Africa (Phelps-Stokes, 1922). One of the Fund's reports on Negro Education in the USA recommended a more broad-based model of education than what the missionaries were offering. The Phelps-Stokes Fund later set up a commission of inquiry, which visited Africa over the next five years resulting into two reports (Phelps-Stokes Fund 1922 and 1925) (McGrath, 2008). These two reports are vital to this research for they make clear the need for more "relevance" and "credibility" in curricula for Africans, both urban and rural, males and females and youths and adults. This commission emphasised the need for Africans to follow curricula which offer education for health, husbandry, use of environment, agriculture, character building, handcrafts and the home, as well as appropriate languages for instruction, preparation for leisure, religion instruction and suitably adapted (McGrath, 2008) academic core subjects. The value of this report also lay in its recommendation to the British colonial office and the following were among the main ones:

- Creation of a Department of Native Education
- Appointment of a Director of Native Education
- Establishment of an Education Advisory Board
- Government to subsidize missionary education work (Snelson, 1974; Carmody, 2004).

The key element of the British policy statement based on these reports and relevant to this research was the acknowledgement that:

Education should be adapted to the mentality, aptitudes, occupations and traditions of the various peoples, conserving as far as possible all sound and healthy elements in the fabric of their social life, adapting them where necessary to changed circumstances and progressive ideas, as an agent of natural growth and evolution (Thompson, 1994:36).

However, making education relevant to the communities was not new. Thompson (1994:35) records that:

Concern that the content of education was largely irrelevant to the real needs of the colonial peoples receiving it was expressed as early as 1847 when Kay-Shuttleworth and the Education Committee of the Privy Council in London urged the inclusion of practical studies related to agriculture and rural industries.

We would argue that for the first time, efforts to adapt the curriculum to the mentality, aptitude and everyday life of the people, were made through the Phelps-Stokes Commission. The 1961 United Nation Economic Commission of Africa (UNECA) conference, involving African countries and the then five colonial powers, further emphasised the need of offering the type of education relevant to the needs of the Africans. African governments were advised to revise and reform the content of the education in the area of curricula, textbooks, teaching methods and the use of mother tongue as the medium of instruction (UNESCO, 1961). However, even if many may have applauded the education grounded in the African Indigenous Knowledge Systems (AIKS); there were others who saw this as a subtle way of keeping Africans in their places [village] (Snelson, 1974). Education for adaptation was then viewed by some to be an integral part of the imperialistic educational system with no preservation or development of key African cultures at heart. Another argument advanced by some authors (Bourne, 1940; Snelson, 1974; Marah, 1987) is that the education for adaptation was highly promoted by colonialists and was meant to give Africans and African descents in the USA the type of education that would confine them to their perceived inferior social, cultural and economic status. Even the use of tribal languages for elementary schools as suggested by the Phelps-Stokes commission was not accepted by all Africans. Carmody (1992:52) cites one typical example in support of this argument:

In *Chikuni*, for instance, the school had to be abandoned because of what was termed 'the apathy of the natives'. This happened very frequently. When local people came to perceive English as one of the best ways of gaining wage employment either at home or through migration, they wanted to learn it [and not the tribal languages suggested by many commission reports].

We would also argue that what may have been ignored was the silent role the formal schooling education plays in changing the attitude of pupils against the traditional way of living. Marah (1987:464) also observes that the "the educated Africans were inculcated with negative attitudes toward their own culture and heroes while they

revered those of the European. They were made to hate their own culture and therefore themselves.” Thompson (1994: 35) also brings out the outcome of schooling to the native children during this period:

It was widely believed that even the very limited amount of schooling, which then existed in African dependencies, was undermining the traditional fabric of local societies. Whether intended for the production of manpower for the administration and the economy or for evangelistic purposes, the embryonic school systems were thought to be producing large numbers of 'detrified' young people who were tending to reject the authority of their elders and their traditional constraints of their societies.

It could also be that Africans may have seen that education with a rural bias, as the case was with education, was not a road to success (Wood, 1983). Quoting Ndabaningi Sithole, a long time freedom fighter in the then Southern Rhodesia, Thompson (1994: 41) writes:

Africans were often shrewdly aware of what it was they expected of education in schools. As Ndabaningi Sithole puts it, 'to us education meant reading books, writing and talking English, and doing arithmetic. At our homes we had done a lot of ploughing, planting, weeding and harvesting. We knew how to do these things. What we knew was not education; education was what we did not know.'

The creation of two departments, the Department for Native⁹ Education and for Non-African Education was suspected for trying to define a particular and inferior sort of education for the African masses that was not literary and equivalent to that meant for Europeans and settlers. Mwanakatwe (1974:22) records that the aims for the provision of the two Education Departments were to:

- Prepare its pupils for highly developed, competitive and sophisticated society found in Europe.(Non- African education).
- Equip settlers with higher education than the natives so that there was no job competition(Non-African education)
- Promote evangelism and spread European civilisation (Native Education by missionaries).
- Produce workers in lowest ranks of the colonial Administration and capitalist firms (Native Education by the colonial government).

However, the fact that the debates on the basic argument that education needs to be adapted to local circumstances go on more than 80 years after the Phelps-Stoke

⁹ Native was the term used to refer to local people (Africans) and had negative connotations that have been carried forward to this day. Even when people refer to local or indigenous people, the word native is never thought of as a possible synonym as it is associated with colonialism.

Commission's report underpins the significance of that report. This raises some contradictions such as whether it was right to solely associate education for adaptation with colonialism (Frank, 1960; Barrow, 1978; Serpell, 1993; Kallaway, 2006); whether we can talk of expanding schooling beyond the primary level and offering relevant education for all in developing countries without adapting education to local circumstances; and whether the rejection of education for adaptation was merely an issue of rejecting the 'messenger' (colonialists) and not the 'message' (education for adaptation).

Despite these arguments and contradictions it can still be said that the colonial government used education as a tool to sieve the great African majority from undue competition with the Europeans. No particular effort was put in place to involve the natives when deciding what to be included in that education.

After Colonialism: (1964- 2000s)

In its early developmental plans between 1964 and 1970, the new government embarked on the expansion of education sector, particularly the primary and secondary sectors, as the situation needed quick attention (Mwanakatwe, 1974; Serpell, 1993; Kelly, 1999; Carmody, 2004). The narrow base of education at independence led the first president of Zambia, Kaunda to say the following words as quoted by Tembo (1978: xii):

As far as education is concerned, Britain's colonial record in Zambia is most criminal. Her colonisers have left the country as the most uneducated and unprepared colony of Britain's dependencies on the African continent.

Kelly (1999) says problems the post independent Zambia has faced with education range from access to the general organisation of the whole education system (MoE, 1996). The focus of many reforms has been on access and not on the relevance of that education to the societal needs and early childhood education has been given a low deal yet very important:

Many developing countries, administration, teacher recruitment, curricula and evaluations are still heavily centralized and there is little encouragement of local initiative. Rather than extending the more pedagogically appropriate early childhood model upward to eight year olds, governments in many countries have chosen to extend downward the formal instruction model for use with three to six year olds (Bennett, 1993:6).

The worsening economic situation has not helped matters (Watson, 1993). Zambia is now one of the eighteen poorest countries in the world as seen below:

Table 1 Poorest countries in the world

RANK	COUNTRY	GDP- per capita(\$)
1.	East Timor	500
2.	Somalia	500
3	Sierra Leone	500
4	Malawi	600
5	Tanzania	600
6	Burundi	600
7	Congo,Rep	700
8	Congo,DRC	700
9	Comoros	700
10	Eritrea	700
11	Ethiopia	700
12	Afghanistan	700
13	Niger	800
14	Yemen	800
15	Madagascar	800
16	Guinea-Bissau	800
17	Zambia	800
18	Kiribati	800
19	Nigeria	900
20	Mali	900

Source: International Monetary Fund (2008).

Obviously, these economic hardships have affected education investments at government and household levels. Economically, the government has strictly adhered to the Structural Adjustment Program (SAP) ¹⁰dictates of the World Bank and IMF. Financial discipline through cash budgets has been at the centre of macro economic policies and some have resulted in deep cuts on the education budgets. Many families have faced the difficulties of meeting the education needs of their children due to jobs. Reaching children through families and community services, identified as effective ways of achieving EFA goals (Bennet, 1993) have been adversely affected.

I argue that with such economic hardships, the persistence of the school model will always prove unsuited to the needs of the people. There is an increasing need to support models that would persuade families and communities to collaborate and participate in the education of their children. Perhaps the inclusion of aspects of AIKS in the formal school may provide an easier and cheaper way for families and

¹⁰ The acronym SAP was at one time spoken in Chinyanja, one of the Zambian Languages spoken in Lusaka as to mean “Satana Ali Pano” (Satan is here) This is because of the hardships the program brought along with it.

communities to do so. This may even broaden the education provision to include the most disadvantaged children in society (Duke, 2004b).

In conclusion it can be argued that the historical context of education in Zambia shows a number of educational reforms that have not brought many changes to the inherited curriculum and achieving any of the six EFA seems impossible. In the case of AIKS the ironical situation is that it is the colonial government that made some efforts in adapting the school curriculum to the needs of the people based on the Phelps-Stoke Commission's findings and recommendations.

Zambia is, now, trying to integrate community studies (I call this AIKS) into the school curriculum (MoE, 2005) and come up with what is called a 'localised curriculum' (what this study calls hybridized curriculum). Details of what is involved in this localised curriculum are discussed in chapter three. One would say that 'an ideal' situation where various forms of education (informal, formal and non-formal) supplementing one another, as stated above, has not been reached in Zambia. Having considered the EFA from the historical context of education in Zambia, I would like to look at EFA from other perspectives:

World view

A number of evaluations and annual reports conducted since the 1990 Jomtien Conference have reported successes and failures by individual countries in achieving the EFA goal. The overall picture is not good and raises the need to look for alternative ways of addressing the illiteracy issues. Concerning countries in Sub-Saharan Africa, Southern Asia and other under developed countries in general; UNESCO (2000:4) reports that:

More than 113 million children had no access to primary education, 880 million adults were illiterate, gender discrimination continued to permeate education systems, and the quality of learning and acquisition of human values and skills fell short of the aspirations and needs of individuals and societies

Giving a worldwide summary of the implementation of the six EFA basic goals (See figure 1), fifteen years after the Dakar conference, UNESCO (2005) monitoring report says that:

On Early Childhood Care and Education, progress towards wider access remains low, with children from disadvantaged backgrounds more likely to be excluded from early childhood care and education. The pace in getting more children into school in developing countries is so low that achieving UPE by 2015 is not possible. The level

of skills among youths and adults are marginal in the developing countries (UNESCO, 2005:1).

The main conclusion in the UNESCO (2005:1) is that in Sub-Sahara Africa, "there is low achievement across each of the EFA goals, implying multiple challenges if EFA is to be achieved." Of interest to this research is the improvement noted in Latin America, which has been attributed to the long-established tradition of a wider participation in basic education. This seems to suggest that a wider approach to this problem where communities, from the early stage, become participants in the provision of education to their young should be given serious consideration (Sillitoe *et al.*, 2005). Answering the question 'is the world on track with EFA, the UNESCO (2006: 11) report on progress toward EFA goals states:

Almost one-third of the world's population live in countries where achieving the EFA goals will remain a dream unless a strong and concerted effort is made.

The answer to the question, "Education for All by 2015, will we make it? (UNESCO, 2007) is a no! This picture calls for urgent need to look for alternative ways of tackling the problem of providing education to all.

African view

Nearly half of the world's countries with very low primary enrolment are in Sub Saharan Africa. This means that in Sub-Saharan Africa Early Childhood Care and Education (ECCE) is still a luxury for nearly all children. This is mainly because ECCE is often provided by private institutions and is concentrated in urban and wealthy areas where parents are aware of its benefits and have the means to pay.

A child in Sub-Saharan Africa can expect 0.3 years of pre-primary schooling, compared to 1.6 years in Latin America and 2.3 years in North America and Western Europe (UNESCO, 2005:1).

On the other hand, the Universal Primary Education (UPE) still has a long way to go, especially for girls. For example, only 58% of children of the official primary school age were enrolled in 2000 making it the lowest of all regions and far below the 84% world average. 44 million children were not enrolled representing 40% of the world total of out-of-school children, more than half of them girls. The region has low enrolments rates along with strong gender disparities and inequalities. A third of the countries in Sub-Saharan Africa are among the poorest nations of the world (see Table 1). It is important to note that much of what has been recorded as improvement

is on access other than on quality of education being offered (Odora, 2000b). The UNESCO (2006:1) states that:

The high-risk group, where achieving the EFA goals will remain a dream consists primarily of countries in Sub-Saharan Africa, (twenty-eight countries Zambia inclusive). This is where the overall challenge of EFA is greatest.

This, therefore, means that if we were to rephrase the UNESCO question, is Sub-Saharan Africa on track with EFA goals, the answer would be a No!

The Zambian view

After the 1990 Jomtien Conference, the Zambian government formed a National Task Force to initiate and monitor EFA activities and programs. The Task Force comprised Government Ministries, Non Governmental Organisations (NGOs), bilateral and multilateral donor agencies and the University of Zambia. Different committee organs carried out EFA decision-making processes. The following are some of the committees formed:-

1. National Steering Committee for the program for the Advancement of Girls Education (PAGE) at Ministry of Education Headquarters has been managing all activities, related to PAGE.
2. The Department of Child Affairs in the Ministry of Sports, Youth and Child Development to co-ordinate activities related to policy on early childhood care, education and development.
3. The Ministry of Education had established the Basic Education Sub – Sector Investment Program (BESSIP) in which it worked with co-operating partners.¹¹
4. The National Steering Committee on Adult Literacy (Later renamed Zambia Alliance for Literacy) under the Ministry of Community Development and Social Services, which has co-ordinated the implementation of the National literacy campaign since 1995.
5. Educational Broadcasting Services (EBS) in the Ministry of Education carried out educational broadcasting.
6. Zambia Community Schools Secretariat (ZCSS) co-ordinated policy and activities of NGOs involved in running community schools.
7. Zambia Pre School Association closely co-ordinated Early Childhood care and Development activities (UNESCO, 2000).

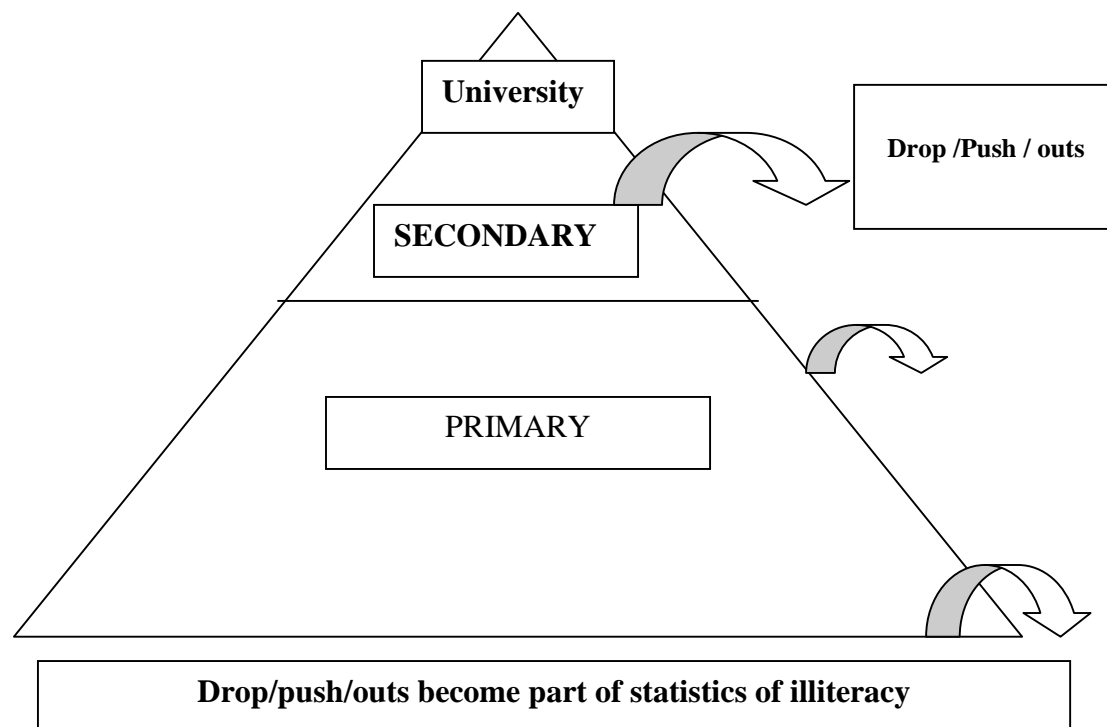
These efforts stated above had a great impact especially on enrolment. A positive impact on girls' education was felt as well. The UNESCO (2007) report has shown

¹¹ For BESSIP see Smith *et al.*, (1998).

the enrolment of girls in schools has improved to the point where there seems to be very little disparity on enrolments between boys and girls in primary schools. It is the retention rate which is very low. The education system currently in practice in Zambia is 7-5-4. This means that the system has seven years of primary school education, five years of secondary school education and four years of University Education. This is slowly being replaced with a 9-3-4 system. The new system has nine years of Basic Education, three years of High school Education and four years of University Education¹². These three stages of education have promotion examinations. Those who do not "pass" the Grade seven examinations do not proceed further with their education unless they repeat Grade seven and 'pass.' The majority of the so-called 'failures' are just 'pushed out' of the education systems (Kelly, 1999). For such ones, their basic education has been reduced to seven years only. The few who proceed to Grade eight are again 'sieved' at Grade nine, implying that currently there are two types of Basic education- for seven and nine years (Serpell, 1993; Kelly, 1999). This throw-away-education system has created a pyramidal structure of education which is not compatible with EFA as majority of these 'push outs' eventually become part of statistics for the illiterates as shown below:

¹² Some professional courses like Medicine and Engineering vary from this pattern as they require five to eight years to complete.

Figure 6 Zambia's Educational Pyramid (Throw-away System)



Such scenarios could have made many Zambians lose hope in education. This in turn affects not just the enrolment of pupils into school but also the progression of those in school.

An Oxfam report on Zambia states that:

The numbers of Zambian children going to school since 1994 have shown some decline especially for girls. The 2005 target the Government has set for achieving universal Primary Education to be reached would imply an increase in enrolment of 96,000 children each year over the period from 1995 to 2005 (Oxfam, 2000: 28).

This revelation is a reflection of the 1990 Census, which provided the following:

On school enrolment children aged 7-13, totalling 830,000, were actually attending school in 1990. Thus, the net enrolment ratio was 59.9%. The remaining 656,000 were not in school representing a total of 41.1% and 327,000 of these were girls. In the rural areas, 501,000 school-age children were not attending school and 247,000 of them were girls. In the urban areas, 164,000 school-aged children were not attending school and 85,000 of them were girls (Kelly, 1994:31).

The 2007 Grade seven results have again showed that Zambia is drifting further away from achieving EFA goals. Out of 293,583 pupils who entered for Grade 7 examinations, only 268,097 sat for those examinations. This means that 25,486 pupils left school and never sat for the examinations (The Post Newspaper, 2007). These

pupils fall into the category of those who left school in Grade 6 as reported in the study conducted by Serpell (1993) among the Chewa people. An interview in this study (Serpell, 1993) with a young man, who left school after Grade 6, begins.

Kodi munchita bwino kusiya sikulu?

Koma ee, nachita bwino

Chifukwa ninji?

Chifukwa olo amene analikutsiliza Grade 7 ndipoaphasa sapeza nchito

Mukamba zoono?

Eee. Kweni-kweni olekeza Form 3 (Now Grade 10), sapeza nchito. Ndipo tili nao mumidzi muno. Tilima nao sunflower ndi ladyo.

'Did you do a good thing to leave school?'

'Yes, I think so: I did a good thing'

'Why?'

'Because even those who finished Grade 7 and passed have no jobs.'

'Are you telling the truth?'

'Yes, in fact, even those who leave school in Form 3 (Grade 10) haven't found jobs. We have many of them in our villages. And now we are together here in the fields growing sunflower and garlic' (Serpell, 1993:14).

We can draw conclusions based on such findings above that the loss of confidence in education as a tool to solving one's social and economic problems could affect EFA's enrolment, progression and completion rates.

Out of the 268,097 pupils who sat for the examinations, only 141,161 pupils "passed" and 126,936 pupils were pushed out of the education system. When we add the numbers of those who left school and those 'pushed out', we come up with a total of 152,422 pupils who are thrown away into the community. These statistics are shown below:

Table 2 Grade 7 Examination results for 2006

Province	Pupils entered for Grade 7 examinations	Pupils sat for Grade 7 examinations	Pupils selected for Grade 8	Pupils not selected ("push outs or squeezed outs)	Pupils who left school before examination
Zambia	293, 583	268, 097	141, 161	126,936	25, 486
Copper Belt	52, 133	48, 666	28, 231	20,436	3,467
Lusaka	47, 831	44, 613	11, 467	33,146	3,218
Eastern	29, 522	26, 505	11, 898	14,607	3,017
Luapula	18, 479	16, 751	12, 714	4,037	1,728
Western	17, 026	15, 083	9, 960	5,123	1,943
Southern	43, 482	39, 686	23, 069	16,617	3,796
North Western	15, 445	13, 707	10, 582	3,125	1,738
Northern	34,965	31,491	17,484	14,007	3,474

Source: Times of Zambia (2007).

These statistics led a Catholic priest Father Derrick Muwina to make this comment in The Post Newspaper (2007):

I think that the Ministry of Education and indeed all Zambians should question the trend by which we throw away half of our young people who sit for exams every year citing failure to reach the cut off point. I have never seen a country in the West or Global North that throws out its young people out of school like this. Education is a universal human right and we in Zambia are denying our young people that right, sad and shameful indeed!

Kelly (1999:195) summarises the problems and challenges that have affected the implementation of EFA in Zambia and calls them crisis:

- A crisis of Access (where little or nothing meaningful is being done to bring the benefits of literacy (Reading and writing and living skills) to about one third of the adult population who continue to suffer from the handicap of illiteracy, where another significant proportion must leave school before completing the primary course and hence almost certainly lapse back into illiteracy).
- A crisis of Quality (where the schools are failing to achieve the objectives society has established for them, above all those of imparting basic communication numeracy and thinking skills).
- A crisis of Credibility (Where questions are being asked about the role of education in development and its function in the entrenchment of social inequalities and injustices).
- A crisis of Financing (where existing commitments have already outstripped resources but where considerations of human rights, social demand economic development, and political necessity all point to the need to assume new and ever expanding commitments).

Although effort is made to discuss many challenging situations facing the implementation of EFA in Zambia, this research concerns itself so much with crisis of quality and credibility as stated above. One way of meeting the challenges facing the implementation of EFA has been the creation of Community schools.

Community Schools in Zambia

Community Schools are owned and managed by the community (Care International Zambia, 2000). These schools offer opportunities to the less privileged children, many of whom are girls and orphans due to HIV/AIDS pandemic. Unlike conventional schools, these ones are found within communities (Durstun, 1996). Mumba (2002:8) identifies three types of community schools:

1. Those wholly outside the government system with varying degrees of community participation.

2. Those which began as a community initiative but which now have assistance from the Ministry of Education and are planned to be incorporated into the Ministry of Education system.
3. Government schools with effective community participation. (This category is considered as part of formal school).

I would call Mumba's (2002) three types of community schools as mere stages which these schools, particularly the rural ones, go through from inception to the time government runs them. In the rural areas, they start as a community initiative or reaction out of the dire need of a school near their area as the nearest government school could be ten or more kilometres away. The community either finds its own old building or constructs a multipurpose building. These schools are run by some school leavers called mentors, who are paid in-kind by the community. When government sends some qualified teachers and start putting up better structures, they become government schools, creating an impression that community schools should be synonymous with some ramshackle buildings (see picture 18). Those in urban areas are often run by the agencies with the help of volunteer teachers chosen by the agencies themselves (Mumba, 2002). These schools are seen as interventions by agencies, whose constituents are the poor, children from HIV/AIDS affected or infected families, orphans and girls (15+ years old) (Durstun, 1996; Mumba, 2003). Although some practical skills such as tailoring, baking and sowing are taught in many of the urban community schools, generally, they all strive to follow the conventional primary school curriculum even when it is common knowledge that the majority of their pupils will not go onto higher education. This could be because the parents and pupils demand it. They regard these practical skills as second rate education. I would like to argue that these schools should follow a community-based or localized curriculum (MoE, 2005) which focuses more on the practical or occupational skills relevant in that area. Other than relying on school leavers, this is an area where the local people with special skills would come in on apprenticeship arrangement. The academic subjects could still be taught but less emphasised. Non-formal educational programs and activities should take an upper hand.

Critique of EFA and the formal schooling system

Many challenges facing EFA and its implementation seem to be linked to the formal schooling system as observed by many authors (Smith, 1934; Nyerere, 1968; Illich, 1971; Ngulube, 1989; Bogonko, 1992; Serpell, 1993; Odora, 1994; Brock-Utne,

2000). There are many epistemological, ontological and methodological questions surrounding EFA which some authors (Hall, 1995; Ashcroft *et al.*, 1995; Odora, 1994; Brock-Utne, 2000; McGrath, 2008) have asked. These are questions that critically analyse the nature and purposes of education. They further question who decides the form, quantity and contents of this education and when it is supposed to be enough. It seems there are no universal answers to a number of these questions and this has translated into challenges and weaknesses of EFA. The key weaknesses of EFA discussed here are that: (a) it focuses on primary education and ignores secondary and adult education (Odora, 1994; Semali, 1999), (b) treats access as an end in itself (Kelly, 1999; Serpell, 1993; Rogers, 2004a), (c) has limited discourses of literacy and education (Brock-Utne, 2000; Rogers, 2004a; McGrath, 2008), (d) education focus on examination (Illich, 1971; Dore, 1980), (e) has adopted a one size- fit- all- approach (Rogers, 2004a; Odora, 2000; Kanu, 2007b), (f) has too many targets, (g) Rigidity of formal school system (Torres, 1999; UNESCO, 2007) and, (h) There cannot be universal basic education.

Focus of EFA on Primary schooling alone

Odora (1994:177), who has followed the implementation of EFA strategies, says that the Jomtien Conference gave disproportionate focus on formal primary schooling. She argues that "it was 'School for All' (SFA) just being labelled 'Education for All' (EFA)." Torres (1999:159) expands this point further as he identifies the 'shrinking' of the expanded vision of EFA from:

- Education for all to the education of children of the poorest among the poor.
- Universalising basic education to universalising access to primary education [or to enrolment into school].

Secondary education has been ignored, leading to massive drop/push outs and exacerbated poor levels of attainment at the primary school leaving examination (McGrath, 2008). Adult education has been ignored by many countries and in some cases regarded as a separate "system" of educational activities (UNESCO, 2007). In some countries it has no particular ministry to handle it.¹³ The absence of appropriate

¹³ In Zambia the Ministry of Community Development has been handling Adult Education and now it is to go to the Ministry of Education, with no policy on it (Mumba, 2003).

infrastructure, educational materials and national policy on adult literacy has “now forced many determined adults learners as old as 50 years old to go into formal schools where they have to mix with their own children” (Times of Zambia, 2008). This is contrary to UNESCO’s (2003) Global Report that effective and sustainable development programs all require a component of adult learning as it cuts across traditional sectors such as education, health or agriculture. This implies that adult learning need to become a matter of global and universal concern since it directly or indirectly affects all the six EFA goals (Torres, 1999; Classen, 1999; Rogers, 2004b; Illeris, 2002; 2003; Draxler, 2008).

EFA treating access as an end in itself

The principle focus of EFA in primary education has been access. This may explain why much of what has been reported as progress are enrolment figures and not what goes on in school. This seems to be influenced by the dominant international policy position that universal access to basic education is one of the key priorities of achieving development (McGrath, 2008).

Limited discourses of literacy and education

Odora (1994:1-2) further observes that:

Instead of looking at literacy as a continuum in different modes of communication from the oral to written, we equated being ignorant of especially the western alphabet [academic literacy] with total ignorance. We have put what is not written as thoughtless, as a weakness, and its limit, as primitivism. Instead of putting literacy the service of a complex range of African knowledge-[in botany, crop and animal husbandry, climatology and midwifery, philosophy and pedagogy, architecture and metallurgy] knowledge that we know have been subjugated by the processes of colonialism and modernity.

The arguments raised in the above quotation suggest that EFA ignores the literacy which comes from the non-formal field (McGrath, 2008) and only acknowledges that from formal schooling (see chapter six). EFA also presents all education as beneficial and ignores some of its negative effects such as those observed by Odora (2000a: online):

The ‘problem’ in education was only defined as an issue of access to schooling education. Firstly, we must realize that the education system is not only structured to continuously expel and stigmatize its rejects, but it also severs all ties with them, with traumatic consequences for learners of different age groups.

It has also been observed that education could be used as indoctrination (Rogers, 2004b; McGrath, 2008). Western education, for example has been said to be at the centre of the African cultural erosion leading to the belief that anything with an African tag is inferior to everything European or American (see chapter one). However, the indoctrination aspect is not typical of Western forms of education alone. Some of the political upheavals and genocides of recent years in Africa have been attributed to the beliefs by a given tribe, based on their IKS sometimes, that they are more superior tribe than the others.

Focus on examination and certificates

Torres' (1999:158) observations on the failures of EFA are centred on the current education system and its focus. He holds that:

It is a vehicle for polarization, marginalization and exclusion; a tool for internal division, misrule and external domination, unable to generate partnership of equals or culture of peace and justice, competence, innovation and collective confidence building and therefore not a vehicle for achieving education for all.

The formal school curriculum's main emphasis is on passing examinations and obtaining certificates for job allocation (Fuller, 1991). The focus on examination sacrifices learning as observed by Dore (1980:1x):

Not all schooling is education. Much of it is mere qualification earning, and more and more of it becomes so. Everywhere, schooling is more often qualification earning ritualistic, tedious, and suffused with anxiety and boredom, destruction of curiosity and imagination, in short anti-educational [or learning].

Dore (1980:141) calls it, "the diploma disease, the scourge of the certificate, and the dependence of individual life-chances on certificates of school achievement." This has reinforced the notion in peoples' minds that formal school education is to make one get a job and not to make one do the job better (Lynch, 1997; Rogers, 2004a). Such education systems do not follow problem-solving approaches and thereby fall in Freirer's (1970) metaphor of "banking education"¹⁴ in which teachers make deposits of information and knowledge in the empty accounts of their learners, the knowledge they can withdraw during an examination. Passing an examination and collecting a

certificate form the climax of education rather than using educational knowledge to solve problems in a given society (Gartner, 1971). Odora 1994:177) adds more points that make the Western schooling a wrong vehicle for EFA. She says it:

- Has almost no community involvement as indigenous forms of knowledge are completely rejected on the basis of their shortcomings.
- Responds to reward system of society and thus encouraging individualism and social stratification.

My argument is that the theory of 'banking education' is not typical to formal schooling education alone. In AIKS the idea that knowledge is passed from one generation to the other implies that this knowledge is always there (banked) waiting to be passed on to the other generation.

One-size-fits-all approach

The main critique to EFA based on the views above is that right from the inception; EFA was squeezed into that one-size-fits-all approach (National Graduate Institute for Policy Studies, 2007). It is unrealistically expected to be the same in every continent, country, town and village. This notion is reinforced by EFA's belief in one path (formal learning) and one form of knowledge (universal 'truths') thereby ignoring informal and non-formal education and local or indigenous forms of knowledge, respectively (UNESCO, 2007).

Too many targets

EFA Dakar Framework had too many targets which were again unnecessarily precise, making Torres (1999:157) ask a question, "Do we really want to find out in 2015 in quantitative terms, how much we failed?" The absence of benchmarks and indicators to measure some of these targets, e.g. quality education, has made reporting on their progress problematic (UNESCO, 2007).

Rigidity of formal school system and its curricula

The formal school system is said to have rigid entry and exit points that remain problematic to communities engaged in full time productive work in their everyday lives (Odora, 2000a; Ntuli, 2002). In most rural places in developing countries, communities are engaged in subsistence farming for their living. Schools are not flexible enough to accommodate such schedules, leading to low school attendances during these periods. Colclough *et al.*, (1993) suggest the creation of learning

societies (Individuals with vast repertoire of 'surface' and 'deep' cultures" drawn from local communities') (Barnhardt *et al.*, 2005) could help. These views are also shared by Srinivisan (2000) who advocates for the creation of Schools beyond the Walls (SBW) (Treating learning as an element of society not limited to formal school alone).

Illich (1971) and Reimer (1971) argue that if schools cannot teach children about their society and shape their values and ambitions and learning patterns, they should be abolished. Schuller (2003:27) adds to this thought by questioning the wisdom of ignoring other forms of education from pupils' environment:

How far the growth of formal learning crowds out other types of learning which may be more enjoyable and more effective? Are we neglecting the resources, which are readily available from communities around us, and the innate ability, which people have to learn from their peers?

I agree with Schuller (2003) when he says we should aim at making these schools friendly establishments so that they complement informal exchanges which some authors (King, 1979; Rogers, 2004b; Illeris, 2003; 2004) claim could make up learning societies. This notion is also supported by Dore (1980: 141) who holds that "to deschool is to throw the baby out with the bath water". I agree with these views and hence the focus of this research. These observations show that we need to look beyond the alien origin of education systems as suggested by Thompson (1994:35) below:

Underlying such criticism of the school systems is commonly the assumption that the basic reason for their failing is the fact that they were alien instruments, torn from their European context and set down by colonial powers in societies to which they were unrelated. If the problem were simply one of alien characteristics unsuitable to local needs or irreconcilable with local cultural patterns, then it may be readily solved. The alien characteristic would tend to wither like seeds planted in unsuitable soils. But in fact these characteristics we complain of have not withered and the seeds have rooted and show every appearance of flourishing.

However, this is a contentious suggestion as the alien characteristic of a curriculum cannot be underrated with such simplicity expressed in the quotation above. Using his analogy of seeds, we can argue that what may make the seeds not to wither may be the watering and the fertilization applied to the unsuitable soil by anyone who wants that seed to grow. Many African post independence leaders have continued to spend much of their educational budgets teaching the languages and curricula of their former colonizers at a great cost to the masses not out of choice but due to the colonial legacy

Education For All (EFA) and the Chewa 'African Indigenous Knowledge Systems (AIKS)'

and cultural, and economic conditions imposed on them (Cooper, 1989; Brock-Utne, 2000; Mazrui, 2001).

However, of interest to this research is what Thompson (1994:35) later suggests within the same argument:

If we fail to analyse the local roots of our problems and instead endorse oversimplified interpretations of their origin, we are unlikely to arrive at solutions, which will meet our needs.

This thesis tries to argue that the root causes of EFA problems are the irrelevant and rigid curricula of formal schools. Hybridizing the formal school curricula with Chewa AIKS could be one possible solution Thompson (1994) seems to suggest. Odora (2000) argues that by ignoring AIKS, the 1990 Jomtien Conference failed to foster a systematic dialogue on models of transformation of education at a cost. She holds that EFA:

Routinely excludes African Indigenous Knowledge systems from its perimeters, especially in areas of early childhood development, life-skills, value of education and other competencies, causing major lapses and further distortions in the life of those who go through it (Odora, 2000: on line).

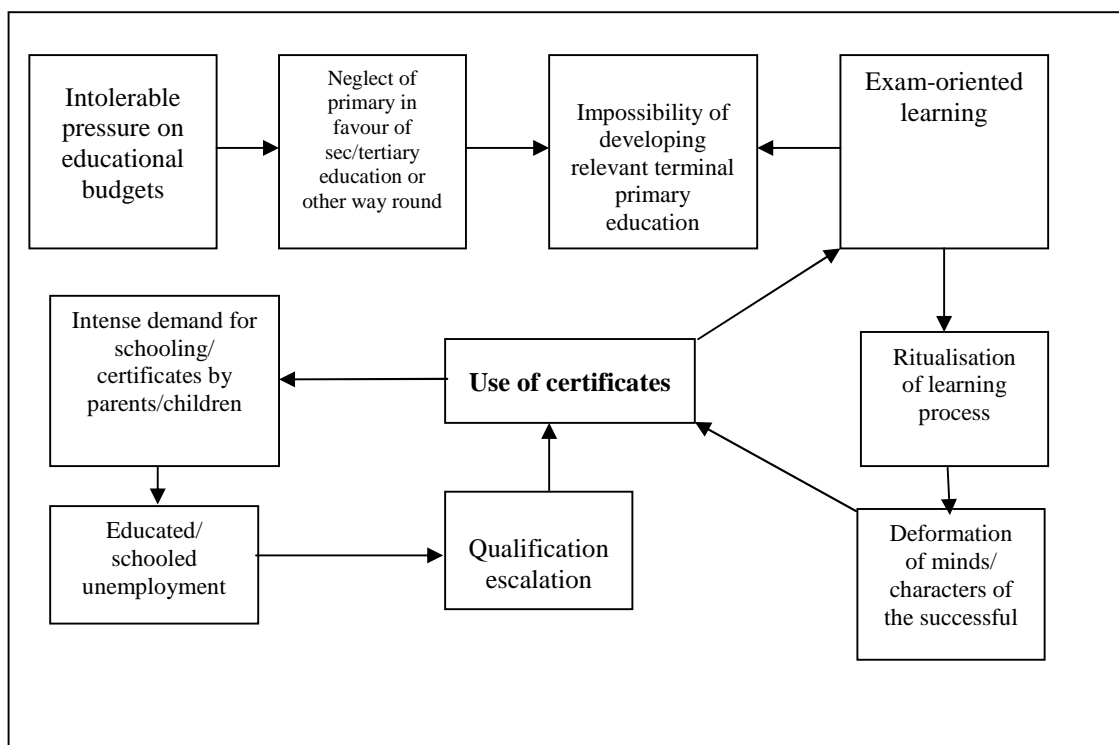
The issues raised in the quotation above, especially on EFA limiting itself to access and treating education as a system that should operate through formal schools alone, are at the centre of current debates (McGrath, 2008) and are cited as main reasons for the failure by many developing countries to achieve any EFA goal.

No universal basic education

My argument is that EFA has not provided benchmarks or indicators for what should be basic education. It all depends on what people expect education to offer. In situations where education is to give jobs, basic education is that which can guarantee its recipients jobs. In such situations, primary education does not qualify to be basic education. If it is only a university education that can give a job, then basic education becomes university education. This implies shifting the 2015 goal post even further.

Dore's (1980) views are supported by many authors (Freire, 1970; Nyerere, 1968; Odora, 1994; Brock-Utne, 2000) and they form a summary of the shortcomings of schooling education and EFA:

Figure 7: Dore’s Framework of schooling



Source: Dore, (1980:141).

The picture being presented through this research is that the Jomtien conference presented an epistemological¹⁵ “tree” with so many branches of ontological views and methodologies underpinning the achievement of its goals. The “tree” has many epistemological branches. This research aims at finding out if AIKS could be one of

¹⁵ Epistemology is” derived from the Greek words *episteme*, which means knowledge and *logos*, which means theory. It is a branch of philosophy that addresses the philosophical problems surrounding the theory of knowledge answering many questions concerning what knowledge is, how it is obtained and what makes it knowledge”(Abelson,1994:on line).

the main roots which should feed and firmly hold the EFA 'tree' as seen below:

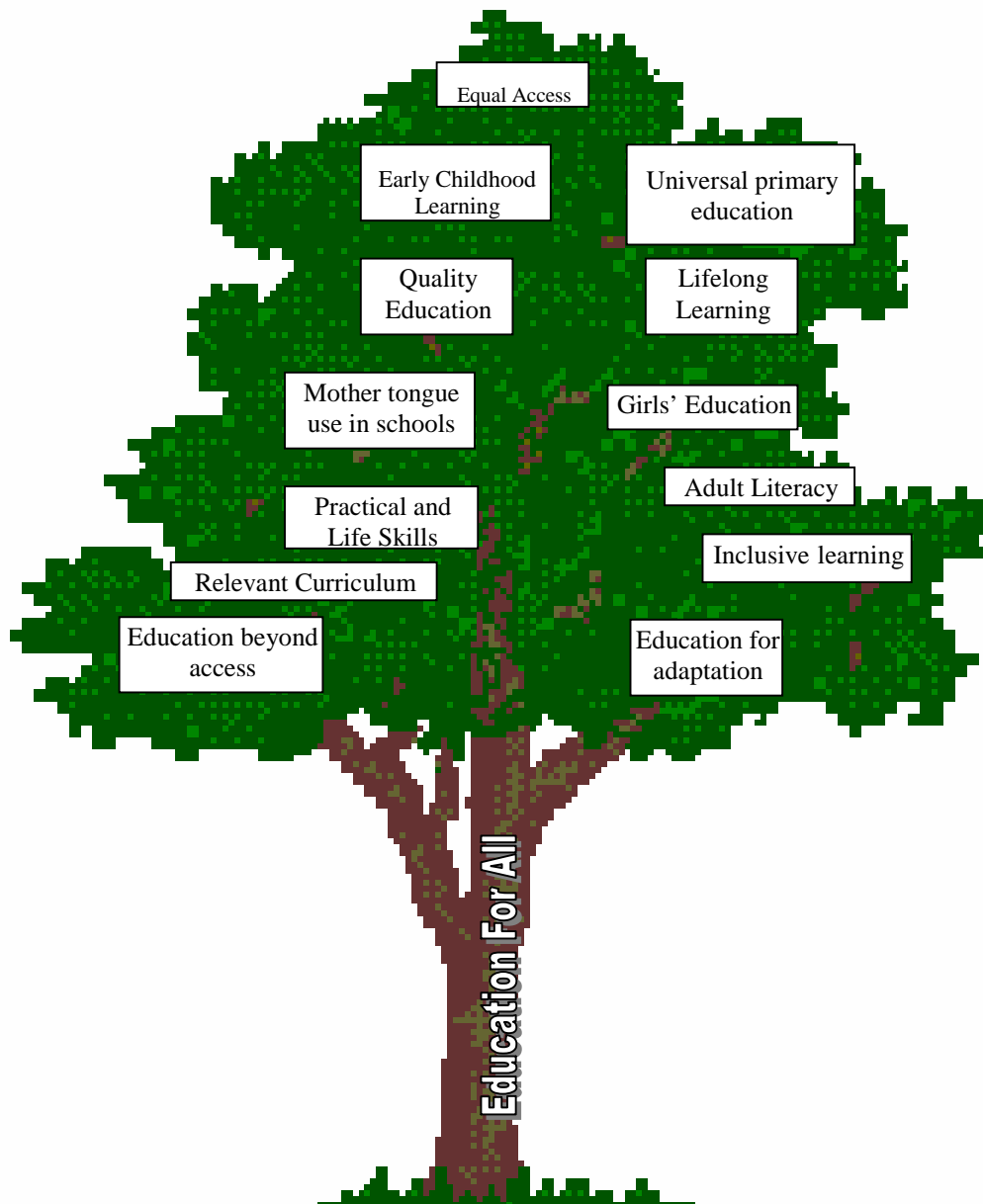


Figure 8 my presentation of perceived branches of EFA "tree"

Semali (1999:307-309) suggests that the EFA "tree" would blossom through a hybridization of AIKS and formal school curriculum as this would bring and reinforce:

- The interface between school and indigenous knowledge.

- Teachers' recognition of indigenous ways of knowing things
- The transfer of indigenous knowledge from the learners' everyday life to schoolwork and the need for teachers to recognise this kind of transfer.
- Community knowledge to be systematically documented and be taught in schools along side the formal (modern) education and technology.
- The need for curriculum developers to examine the culture of school as well as the culture of the community to broaden the understanding of how the two would intersect.

Such views confirm Bennett's (1993: 10) claims that if schools wish to serve all, they should be "more open to community needs and incorporate dynamic links with them to tackle questions of social and environmental settings and act as a conduit for community support service. Offering parenting and family support may make families offer early childhood education in line with school programs.

Attempts to hybridize the formal school curriculum with AIKS

Education For Development (EFD)

In line with the presidential decree, between 1974 and 1976, the Ministry of Education conducted a radical critique of Zambia's educational program. The main finding was that the education system was creating class inequalities producing an elite class with an individualistic and white-collar mentality, who despised manual work and those skills so much needed to transform the Zambian environment (Kaunda, 1968; 1972; Kaluba *et al.*, 1989:165). This culminated in the publication of a draft proposal entitled "Education for Development" (EFD), whose major theme was that:

The combination of study and work is the main theme of Education for Development. No student will be exempt from work, since work will be a part of his or her studies. And no worker will be exempt from continuing to study, because society will insist that study is part of a worker's duty (MoE, 1976: 2).

I agree with some authors who have argued that, in essence, this draft aimed at reforming the education system to suit the nationalist and socialist climate prevailing in the country (Carmody, 2004). The draft had two parallel frameworks for progress through the educational system namely:

1. Full-time education: Study and work.
2. The world of work: Continuing education, work and study (including workers and in-service education).

Underpinning these two frameworks was 'education with production.' The presidential decree made it mandatory for every school to have a production unit (PU), justifying the calling of school production units in Zambia a 'presidential experiment' (Kaluba *et al.*, 1989). The assumption was that the concept of education-with-production was indigenous to pre-colonial Africa (Bourdillon, 1980). The key transformational impact of EFD was creating awareness of the perceived inter-relationship between study and work. However, it had serious weaknesses and contradictions which led to its rejection. Bourdillon (1980) observes that the EFD draft lacked coherence due to the credibility gap between the brand of revolutionary humanism (Kaunda, 1968) underpinning EFD and the more liberal, Christian-based and individual-oriented brand of humanism Kaunda articulated, not pragmatic as it ignored potential problems it would face during its rapid implementation and it overloaded teachers who were to teach normal classes, master various kinds of distant teaching, undergo Zambian National Service (ZNS), participate in continuing education and literacy campaigns, be fully involved with production unit work in school and develop new teaching materials. EFD was Kaunda's attempt to introduce the prototype of Nyerere's (1968) education for self reliance (ESR) discussed below. It is widely believed that Nyerere implemented what Kaunda had devised but failed to implement.

Education for Self-Reliance (ESR)

Education for Self-Reliance (ESR) was an example of a national effort to indigenize the curriculum in Tanzania. This program emphasized practical rural-oriented education. The political view at the time of its formulation was that Western forms of education had caused much damage to African traditional ways of learning and teaching, and therefore needed to be de-emphasized. Martin (2003:28) holds that:

For Nyerere, the idea of 'self-reliance' was the precondition for building a socialist society in a poor African country struggling to find its own, distinctive way in an emergent neo-colonial world. He believed in the capacity of ordinary people to depend upon themselves and their own resources to create the social and economic conditions for freedom, justice and equality.

Julius Nyerere's educational philosophy of ESR seems to be captured in current debates on the need to provide lifelong education for all. Coombe (1970:26) claims that the ESR program made Tanzania "offer a testing ground for the proposition that the formal school system at all levels could become a direct agency of economic

development and a transformer of social values.” Nyerere (1968) saw the dominant formal means of education as enslaving and oriented to western interests and norms (Furley *et al.*, 1966). Basing his arguments on Nyerere’s (1968) reasons for establishing ESR, Kassam (1995:250) sums up his critique of education systems in many developing countries inherited from former colonial governments as follows:

1. Formal education is basically elitist in nature, catering for the needs and interests of the very small proportion of those who manage to enter the hierarchical pyramid of formal schooling. ‘
2. The education system divorces its participants from the society for which they are supposed to be trained.
3. The system breeds the notion that education is synonymous with formal schooling, and people are judged and employed on the basis of their ability to pass examinations and acquire paper qualifications.
4. The system does not involve its students in productive work. Such a situation deprives society of their much-needed contribution to the increase in national economic output and breeds among the students contempt for manual work.

The third point in the quotation above is a reminder of the approach taken by EFA of treating education as a system that manifests itself in formal schooling with specific destinations to be arrived at and be rewarded. This is the approach which I have argued does not support the provision of education for all. ESR was an attempt to implement radical educational reforms using local materials in the curriculum. The perceived vision ESR gave to many Tanzanians was that the community was the principal educator rather than a passive observer. ESA tried to match learning with community’s needs. The assumption was that once that was done, education, whether indigenous or formal, could have a galvanizing effect on the lives of the learners. This would, in turn, influence access, progression and completion rates of pupils at various levels. This implies that ESR was for a hybridised curriculum between the western forms of knowledge and the African Knowledge Systems (AIKS). Coombe (1970:26-29) says ESR was “an outgrowth and elaboration of an ever-increasing well defined national political and economic standpoint, which achieved substantial institutional expression, mobilized all stakeholders and that the educational policy itself [ESR] was a fundamentally valuable pedagogical ethic.” However, the weight of evidence as to what actually happened is against Coombe’s (1970) claims. The short comings of ESR (Kassam, 1995; Semali, 1999; Kelly, 1999) are important to this study as they can act as a point of reference to any reforms to be undertaken in trying to hybridize

western schooling with AIKS. Some of the shortcomings of ESR identified by Semali (1999:127) are:

- Dependence on foreign assistance in fiscal planning and the aid-dependency syndrome;
- Continued reliance on macro planning which ignore local conditions, population growth, basic needs, indigenous knowledge, and disparities in regional, urban, rural, and remote areas;
- Lack of African teaching methodology at the formal school level;
- Difficulty to attract donor support for research in indigenous education;
- The alienation of many intellectuals (the elite) from their own culture due to colonial and historical legacies;
- The concept was more of a political ideology rather than a pedagogical one and was bound to die out with the owner (Nyerere).

The last point sums up the perceived failures of ESR. I agree with the view that ESR was more of a political agenda than a pedagogical one. It may have failed as a political ideology but could still be a point of reference as a pedagogical approach to making education relevant to the local needs. Like the education for adaptation which was grounded in the colonialists, ESR and EFD were not grounded in the people but in leaders who were the main proprietors. These reforms were also associated with revolutionary socialist and communists principles and therefore could not solicit for support for funding from the capitalist West or even ideological support from the Christian majority and religious organizations.

Despite its shortcomings and perceived failures, we could still say ESR raised the importance of parents, communities or elders to participate in the design of the curricula (Semali *et al.*, 1997). It established a relationship between education and the great needs of the society. In terms of method, ESR raised one important issue relevant to this research that teachers cannot teach something their pupils already possess (Chewa AIKS). Kassam (1978:33) agrees that teachers should aim to draw out the things the learners already know and show their relevance to the new things which have to be learnt so that they "build up the self-confidence and demonstrate the relevance of experience and observation. This will show pupils that by sharing knowledge, we extend the totality of our understanding and our control over our lives." I would argue that the principle behind ESR can still help in shaping my proposed study and could guide current debates on the integration of AIKS with

formal school curriculum. This is in line with the Chewa proverb that says, *umanena chatsitsa dzaye poti njobvu ithyoke mnyanga* (meaning do not look at how the elephant's tusk was broken but what dropped the wild fruit (*dzaye*) for it to break the tusk or '*usaone momwe wagwela koma chakugwetsa* (meaning do not look at where you fell, but where you tripped). The issue is not the perceived failure of ESR or EFD but what made them fail so that a way forward is found.

Conclusion

This chapter has established that both the missionaries and the colonial authorities had their personal agendas for the education they provided. While the former had evangelical reasons (Religious Education to All), the latter were preoccupied with offering compulsory education that would prepare the settlers' children for the European society (Compulsory Education for All Europeans) and limit unnecessary competition for jobs with natives. Talking about AIKS, both groups had their own reasons for not supporting it. For the missionaries, AIKS was a demonic cult that blinded and hardened the natives and made them not see the light brought in by the new faith. To the British colonial authority, AIKS was a threat as it unified the people into one force.

The chapter has suggested that carrying forward the curricula left by her colonial master has rendered the Zambian educational system irrelevant to the needs of the country. The chapter has further argued that formal school model alone cannot achieve EFA in Zambia and beyond. Active participation of families and communities in the education of their children may help in narrowing the gap between school and community. Hybridization of formal school curriculum with AIKS may be one of the possible models to be used in this fight. There is need to see how various forms of education (informal, non-formal and formal) can complement one another for quality education (See figure 5). All the stakeholders (Figure 21) need to work together and implement a broad-based curriculum that takes into account the needs and abilities of the learners, unlike the animals' broad-based school curriculum (Khera, 2004) stated at the start of this chapter.

The chapter has revealed that discourses focusing on educational renewal have rekindled the argument among many African intellectuals that for schooling education to be relevant in contemporary Africa, it must be based on people's way of life

(Phelps-Stokes' education for adaptation revisited). This view suggests that the reasons underpinning ESR of Nyerere (1968) and EFD of Kaunda (MoE, 1976) are still alive (education for adaptation regenerated under different names and masters?). I would argue that the perceived failures of ESR, EFD and possibly the Phelps-Stokes' (1922) Education For Adaptation were more of rejecting the 'messengers' (Nyerere, Kaunda and the colonialists respectively) and not the 'message' (making education relevant to people's needs). The chapter offers a critique to EFA. I agree with McGrath (2008) who argues that education itself must be democratised through approaches that would allow critical dialogues among all stakeholders (see Figure 21). The next chapter presents the African Indigenous Knowledge systems (AIKS), Local Knowledge (LK) forms of knowledge and the frameworks guiding this research.

CHAPTER THREE

INDIGENOUS AND LOCAL KNOWLEDGE SYSTEMS (IKS&LK) AND FRAMEWORKS AND THEORIES FOR ANALYSIS

Introduction

This chapter forms part of the literature review. It defines Indigenous Knowledge (IK), Indigenous Knowledge Systems (IKS), African Indigenous Knowledge Systems (AIKS) and Local Knowledge (LK). The differences between LK, IK, IKS and AIKS are highlighted in this chapter. The distinction of these concepts is vital as it makes the work more focused on the issues under discussion- the AIKS. The chapter further explains how these concepts relate with the formal school curricula, in the various areas. Additionally this chapter gives an overview of studies from some different contexts so as to position the study in a wider perspective. Further, the chapter presents some findings from some countries in Africa and the Chewa people, in particular. This is to acknowledge what has been done so far in regard to IKS in general and AIKS, in particular. Some of the studies and works on IKS from other parts of the world, like Alaska, in the USA, have been selected with intent to draw attention to ongoing issues surrounding the hybridization of the IKS of the minorities and the formal school curricula. Later, the chapter illuminates the research gap in the literature that this study tries to contribute to. Unlike previous studies cited, this study is the only one of its kind to look at how AIKS can enhance the achievement of EFA goals. This is followed by brief critique to AIKS.

The chapter further discusses various theoretical frameworks and theories that support the study. These are frameworks and theories that try to identify some interconnectivity and complementarities that may or may not exist between different education systems. The theories and frameworks used are aimed at guiding this study in establishing whether or not IKS, rooted in indigenous cultures of people, especially those from the developing world, and the minority groups of native people elsewhere can be hybridized with the formal education or school systems imported from their former colonial masters in order to enhance the achievement of EFA goals. There are four main theoretical frameworks guiding this study:

1. The Barnhart *et al.*, 's (2005) Model of an Indigenous Iceberg, developed by the Lower Kuskokwim School District of Alaska, USA (Barnhardt *et al.*, (2005).
2. The Conceptual Model of Hybridizing IK and Formal Science Knowledge in Nigeria (Adedipe, 2004).
3. The Culturally Based Curriculum Model (Barnhardt *et al.*, 2005).
4. The Communication Strategy for Indigenous Knowledge Model (Sillitoe *et al.*, 2005).

However, in order to draw ideas from other authors with similar opinions on IKS and AIKS, this chapter firstly discusses some supplementary theories before the three main ones. This is done in order to focus the study. These are:

1. Curriculum inquiry and indigenous literacy. (Hawkins *et al.*, 1987).
2. Dialectical modernisation theory (Martinussen, 1997).
3. Taxonomy of educational purposes (Dore, 1980).

Theories and frameworks often attract criticism from various authors. This chapter gives a general critique to the theories and frameworks used. Finally a conclusion is given, underlining why these frameworks and theories have been adopted in this study.

Indigenous Knowledge (IK) and Indigenous Knowledge Systems (IKS)

To anthropologists, IK is regarded as enculturation, that is, the process and product of learning cultural traditions throughout one's life so as to enable a person to adjust to his/her environment (Phillipson, 1993). To professional educators, IK means education that is foundational or traditional (Abdullah *et al.*, 1994; Domfeh, 2007). On the other hand, sociologists see it as a process of becoming a member of a society (Ocitti 1973; Morgan, 2005). The three ways of defining IK stated above seem to be too general, and limited. To say that IK is foundational may imply that it never grows but remains static. Also, to say that it is traditional may imply that IK is a preserve of indigenous people or rural communities only. Defining IK as a product of learning cultural traditions without specifying which cultural traditions may limit it to the surface and folk cultures only, leaving out the deep culture (See Barnhardt *et al.*, 2005 Ice berg cultural model in Figure 9). Jones *et al.*, (2007: on line) seem to include all the three levels of Barnhardt *et al.*, 's (2005) cultural model when they say:

IK is embedded in the cultural fabric woven with the social, economic, technical, and scientific threads of a people developed and refined over time.

Smith (1934: 319) defines IK as “a system of knowledge comprising realities and survival skills of a given people in relation of their day to day life.” Many authors (Kelly, 1999; Semali *et al.*, 1994) describe IK as an element of social reproduction and renewal essential for the progress of any country. So IK is the socialisation process, the learning by doing and apprenticeship and the learning through oral literature and rites (Odora, 1994; Quiroz, 1999). Ajayi *et al.*, (1996) claim that even if this was education without graduating, there were levels in the education offered. They distinguish three levels namely elementary, (involving mother and child), an informal system of apprenticeship, and the production and transmission of new knowledge for the understanding of deeper things like the world, man, and God (higher education). These levels suggest that indigenous knowledge involved far more than an inward looking of socialisation (Quiroz, 1999). Ajayi *et al.*, 1996:4) assert that:

There were no clear cut gradations, but it is possible to speak of an elementary level where, besides basic moral education and socialisation into the kinship group and larger community, the child learnt from the mother and other adults within the household to talk, to count and appreciate the subtleties of the language.

Many authors, (Ngulube, 1989; Abdullah *et al.*, 1994; Semali *et al.*, 1994; Makori 2001) acknowledge that this elementary level was largely individualised between mother and child but also communal for children of the same age within the household. It worked well as they discussed through riddles and conundrums, games, fables and story telling. The second level, in their understanding, occurred when the child was educated partly through an informal system of apprenticeship to one or more adults to acquire skills in an occupation and the knowledge relevant for the pursuit of that occupation. Higher Education in the African context was responsible for the production and transmission of new knowledge necessary for the understanding of the world, the nature of man, society, God and various divinities, the promotion of agriculture and health, veterinary medicine, literature and philosophy. Ajayi *et al.*, (1996:4) hold that the principal objectives of the three levels of indigenous education [knowledge] were to:

- Transmit and conserve the accumulated wisdom of the family, the clan and the ethnic group. This way, children considered as new members of the society, were helped to adapt meaningfully to their physical environment so crucial for survival.

- Mould character and moral qualities, develop physical aptitudes and combine manual activities with intellectual exercises.
- Produce a fully socialised person, emotionally fit for all the challenges of life. After all this was perceived as lifelong education.
- Encourage the perpetuation of ethnic institutions like marriage, laws about different issues well expressed in proverbs, sayings of the wise, riddles and stories, language use and societal values which were to be handed down over the years from preceding generations

The last principle seems to suggest that IKS does not change but remain static, which is not the case. The first principle reinforces the notion that this accumulated wisdom is always the same and 'true, yet this research has shown that some aspects of the Chewa AIKS have been questioned and changed with time, some changes have come from within Chewa AIKS itself (see chapter six). Some Chewa values have changed with the interaction of Chewa AIKS with other cultures as discussed in chapters four and six.

Bray *et al.*, (1986:1) summarise the principal objective of IK into three forms namely:

1. Normative goals (concerned with instilling the accepted standards and beliefs governing behaviour.)
2. Expressive goals (concerned with the creation of unity and consensus).
3. Instrumental goals (refers to the competitive elements within the system in intellectual and practical matters, but this competitiveness is controlled and subordinated to normative and expressive aims).

Osuji *et al.*, (1998) seem to agree with Bray *et al.*, (1986) when they summarize IK into three components as well:

1. Moral Component (members of a community are expected to learn to live within the norms or moral code of the society)
2. Intellectual Component (Every member of a community must have essential knowledge within the cultural setting. This knowledge is not compartmentalized into subjects. It is gained in real life context.).
3. Vocational Component (To be a productive member of the community, everybody belonged to an occupational group e.g. Farming, blacksmithing, drumming, medicine, midwifery, woodcarving, leathering, weaving, fishing).

I would say that point number two above seems to corroborate with views expressed by other authors (Warren *et al.*, 1995; Sillitoe *et al.*, 2005) that IKS is peoples' way of life, meaning that teachers cannot be said to be imparting IKS to their children. However, I can argue that even if AIKS cannot be compartmentalized into subjects,

some of its aspects can still be related to a number of core subjects in the formal schooling (see chapter four).

This, in summary, shows that for the millions of indigenous peoples of Africa, Latin America, Asia, and Oceania, indigenous knowledge, which others call native way of knowing, is an everyday rationalization that rewards individuals living in a particular locality. People in these localities have come to terms with their natural environment to survive. Fafunwa (1974:17) further adds that:

Every society, simple or complex, has its own system of training and educating its youth. Education for good life has been one of the most persistent concerns of men throughout history. What may differ from place to place, nation to nation, or people to people are goals and the method of approach.

Some authors (Brouwer, 1998; Kiggundu, 2007) have tried to show a distinction between IK and IKS. This distinction shows one to be a body of knowledge (IK) whereas the other (IKS) a system which includes the techniques and the methods used by the communities to harness that body of knowledge, the IK. So we can conclude that IK is as Moahi (2007: on line) puts it:

Knowledge, ideas and practices that are peculiar to a particular community and embody the community's identity and ways of surviving and maintaining the environment they find themselves in.

On the other hand, IKS is a system that harnesses and spreads the IK (Kincheloe *et al.*, 1999). Using an analogue of a river and its water, we would say IK is like water while IKS is like a river where the water flows.

African Indigenous Education Systems (AIKS)

The IKS practised in African countries is commonly known as African Indigenous Knowledge Systems (AIKS). In the topic of this research, AIKS is in quotation marks ("AIKS"). This is because this is a contested expression. Some authors and researchers especially from the West have argued that AIKS does not exist as individual African countries have unique IKS. Other authors have argued further that no body of knowledge can belong to a tribe and on that basis refute the existence of a homogeneous body of knowledge to all the African countries (Herbert, 1993; Semali, 1999). However, it is common in many African countries and to many African scholars and researchers (Ocitti, 1973; Fafunwa, 1974; Mwanakatwe, 1974; Ngulube, 1989; Serpell, 1993; Odora, 1994; Ajayi *et al.*, 1996; Kelly; 1999; Omolewa, 2001;

Omolewa *et al.*, 1998) to use the term 'African' when they are writing about IKS of different African countries. It is therefore more or less common knowledge in many African countries that any piece of item, or indeed form of knowledge that is not of European origin or English is automatically 'African' and does not take the name of an individual country. For example, hospital medication or formal school education are known as European or western medicine (*mankhwala ya chizungu*) or European education (*Maphunziro ya chizungu*) respectively while often you hear of *mankhwala ya chifilika or yachi black (for blacks)* but never as 'Zambian medicine or Chewa medicine when referring to herbal or African medicine). This implies that the definitions above, would also apply to AIKS. This research will consistently use AIKS other than simply IKS for the sake of clarity. When referring to the IKS practised by the Chewa people, this paper will refer to it as Chewa AIKS. The term, indigenous and thus the concept of indigenous knowledge has often been associated, in the western context, with primitive, the wild, the barbaric, and the natural (Semali *et al.*, 1995). These colonial masters treated AIKS as if it existed in a vacuum and never belonged to the community (Ocitti, 1973; Ngulube, 1989). Importantly, in their minds they were "bringing education" to the primitive and barbaric natives (Bray *et al.*, 1986). Such representations have evoked condescension from western observers and elicited little appreciation for the insight and the understanding indigeneity might provide (Semali *et al.*, 1994). Omolewa (2001:4) argues:

Education is by no means an invention brought to Africa. It has always been a permanent feature of life on the African continent. The African continent has, indeed, always had her own programs of literacy, her own systems of education and ways of evaluating and making valid judgements peculiar to her although most often unappreciated by European commentators and "experts."

This proves that indigenous forms of education existed and worked in Africa before the arrival of the European missionaries. However, their content differed from society to society though goals were strikingly similar (Bray *et al.*, 1986; Kelly, 1999). This system of education comprised realities and occupational skills of a given people in relation to their day-to-day life (Smith, 1934; Odora, 1994). Home was the centre of the learning process where everybody learnt the basic requirements of life. The home provided, thus, the setting for a holistic approach to education. It can be argued that access was not an issue. Omolewa (2001) cites a number of qualities of AIKS. He explains that in AIKS, distance measuring and calculations often wore a human and sympathetic face. He further adds that when you were new to a place and wanted to be

given a direction to a particular destination, the answer you were most likely to receive was not often in terms of the actual distance in kilometres but some imprecise but sympathetic suggestions as "it is just around the corner". The Chewa people use expressions such as:

Mwafika kaleOlo nkuku/ nkumba ziyendelana

This, in English, would translate as: "You have already arrived. It is so near that even our chickens and pigs and theirs visit one another." The idea was to encourage the traveller to go on until the goal was accomplished. Such could be the skill teachers needed to learn and employ to encourage their pupils to go on with school rather than threatening them with examinations. The African traditional society was also known for the respect it had for the truth, honesty, transparency, commitment and dedication. Deviants and malefactors were brought before the elders to be dealt with firmly but justly (Omolewa, 2001; Chinweizu, 2007; Wambu, 2007). The judicial system was functional and fast, as cases did not take too long to be disposed of.

The AIKS also had their indigenous technology for manufacturing such products as soap, cream, powder and other cosmetics, hoes and axes, guns and gunpowder, cloth, salt to mention but a few (Ngulube, 1989; Semali, 1993; Omolewa, 2001). Concerning health care, the traditional African doctor was a very knowledgeable man or woman who handled many cases, including even surgery in some cases. He or she knew the roots, the herbs required for the healing of the community. This is not to suggest that there were no bad African doctors who were bent on exploiting their communities. They were and are still there.

The Agricultural system was perceived to be adequately handled. The farmers practised the fallow system and shifting cultivation, which is called "*Chitemene* system" among the *Bemba* people of Zambia. They knew exactly when to plant and the best time to harvest- to avoid waste. However, the *Chitemene* system of farming has been criticised by the government for causing deforestation in areas where it is practised. The accounting system was adequate for its purpose, as every one knew how to keep very accurate records by marking stripes on the wall. In Chewa, the counting is in base five while the English one is base ten. This aspect in counting from the AIKS is an important component not to be ignored (see chapter six). It was considered abnormal to breed an unemployed citizenry. Proverbs, sayings of the wise

and riddles were always available to aid the courses in history, logic, ethics and philosophy.

In AIKS the emphasis is on life-long learning, where you study and do not graduate but rather move from one phase of learning to another. Many writers (Kelly 1999, Bray *et al.*, 1986; Ngulube, 1989; Bogonko 1992) have shown that the education acquired through these systems was morally progressive, gradual and very practical. Education covered actual life and the intricacies of day-to-day life in the society where the learner lived. Bogonko (1992.6) writes.

The values, knowledge, and skills of society were transmitted by work and trained by example. The education was characterised by its collective and social nature because every member was learning and teaching all the time".

The notion that everyone was learning and teaching in AIKS is a contentious one considering that the age of a person is the main prerequisite to becoming a teacher. Every old person is assumed to be wise enough to teach the younger ones, which, in my opinion can not always be true. The children are considered to be perpetual learners (See the critique to IKS in this chapter).

Local Knowledge (LK) versus Indigenous Knowledge (IK)

Morgan, (2005) holds that the concept of "local knowledge" has its basis in indigenous, in the traditional and the established. He further holds that the term local knowledge has sometimes been used as a synonym for culture. This is supported by many authors (Warren *et al.*, 1995; Rajasekaran, 1993; Chiwome, 2000) who have defined indigenous knowledge as local knowledge that is unique to a given culture or society. They hold that IK is the systematic body of knowledge acquired by local people through the accumulation of experiences, informal experiments, and intimate understanding of the environment in a given culture (Rajasekaran, 1993; Luna, 2005). However, Morgan (2005) seems to show that local knowledge may not necessarily be indigenous but that which has been established in a given locality. The locality may either be rural or urban. This means that while many authors (Warren *et al.*, 1995; Haverkort, (1994); Rajasekaran, (1993) refer IK to the unique, traditional, local knowledge existing within and developed around the specific conditions of people indigenous to a particular geographic area, rural or urban, it must be with the acknowledgement that non indigenous people living in a particular area, may have

their own local knowledge (Ruddle, 1993). Brouwer's (1998: 13) definition of IK as "a general umbrella concept that must refer not only to the knowledge of indigenous people but also that of any other defined community" would mean that LK and AIK are components within the IK. This distinction between IK and LK is a narrow one, but useful as it limits the tendency by some authors of using the two terms interchangeably (Herbert, 1993).

Critique of IKS

To early missionaries and the colonial masters, African Indigenous Knowledge System (AIKS) existed in a vacuum and that it never even belonged to the community (Ocitti, 1973; Ngulube, 1989). Generally, AIKS is considered to be very rigid and unwritten, backward and superstitious. In a number of cases AIKS has been considered to be absolutely incompatible with modern society and development and should, therefore, be relegated to the archives and museums. In some extreme cases, AIKS has been described as a desperate and irreconcilable system of thought which is unstructured, unscientific and a myth. The argument is that no education would belong to a tribe (Ocitti, 1973; Omolewa, 2001). The assumption is that, unlike western knowledge, which is ever being constructed, AIKS is always there waiting to be passed on from generation to generation, hence old, and not universal. The other argument is that although it is perceived to be more widely shared locally, no one person, authority or social group would claim knows it all (Sillitoe *et al.*, 2005). Others argue that it does not exist nowhere as a totality, as there is no grand repository, and hence no coherence discourse (Sillitoe *et al.*, 2005). This is particularly so when we consider what Thrift (1996) argues that IKS or Local Knowledge (LK) manifests certain sorts of information and keep other sorts hidden or unknown to others. Thrift's (1996:99-100) differentiates this kind of unknowing into five kinds that seem to be relevant to this discussion:

- knowledge that is unknown, because it is spatially or historically unavailable;
- knowledge not understood, that is, outside a frame of meaning;
- knowledge not discussed and perhaps taken for granted;
- Actively and consciously concealed knowledge; and distorted knowledge

These are the views that make research in IK and using the qualitative methodology very subjective. However, advocates of AIKS have often considered such views stated above as mere misrepresentations that have evoked condescension from western observers and elicit little appreciation for the insight and understanding of the indigeneity that AIKS might provide (Semali *et al.*, 1994; Knijinik, 1997).

Writings and specific research studies on IKS

Warren *et al.*, (1996) claim that generally, there is now a growing awareness among many development practitioners of the relevance of IKS resources as critical factors and cultural capital in the development process. The need to come up with curricula that accommodate the indigenous knowledge of the participants in that education is voiced by many academics now than ever before. Many developing nations and donor agencies are becoming more interested in the role IKS can play in making development projects more effective and efficient (Kolawole, 2005).

There are a number of qualities of IKS that have been cited by many authors (Mwale, 1973; Ngulube, 1989; Serpell, 1993; Semali, 1993; Omolewa, 2001; Omolewa *et al.*, 1998; Barnhardt *et al.*, 2005). Some of these qualities have been identified as a result of research conducted in IKS. Briefly, I will cite some research studies in IKS that have shown the need to mainstream IKS in many developmental programs.

A Comparative study of Primary Schooling in Zambia and Elementary Schooling in New York, USA (1976)

Eleanor Leacock, who held the anthropology chair of the City College University of New York, traced some of the history of Western Education progress in Africa and gave some of the fallacies, problems and successes of their operations. In this study, she compared the Zambian educational progress she observed in Lusaka and Chipata, in the Eastern Province and the New York City Schools she had seen. The Institute for African Studies, University of Zambia, the Louis M. Rabinowitz Foundation and the Bureau of Research, U. S Office of Education sponsored this study.

In Zambia, the study explored both the nature of the contemporary Western influences on educational practices, and what the bases, are for African alternatives. Material

was gathered from the city (Lusaka) and countryside (Chipata) primary schools. The study aimed at establishing the relationships between:

1. The role school played in preparing children for adult life and the attitudes towards schooling held by children, teachers and parents.
2. The school curriculum and children's out-of school experiences
3. Western influences on teaching styles and content, past and present and the understanding of how children could be prepared in school for a creative, humanistic and rational approach to the mastery of social and technological problems.

She observed classrooms in three primary schools in the capital city of Lusaka and two rural and one small city schools. She also observed children at play and at work. Additional data was collected through interviews with children, teachers, parents and other adults. She also collected and analysed descriptions and explanation of games and other children activities and translation of children's songs and stories. Leacock's (1976: 242-5) study revealed that:

- The predominantly socialising function of schools, as they operate within the framework of western social economic institution, acts to the detriment of children's education.
- Strongly prescribed styles of behaving and communicating, that link success in school with the acquisition of the so-called middle-class white-patterns, take precedence over training for thinking.
- The nations of Africa, like Zambia, do state their strong intentions of borrowing selectively as they frame their designs for contemporary living. They wish to adapt education to their particular circumstances, their present needs and their cultural traditions but are often at odds with lack of full economic independence from the neo-colonial bonds with which they have to contend.
- Recognition of the need for alternatives to western-style education conflict both with institutionalization of nineteenth-century patterns of western schooling introduced to Africa by the missions and with the tendency to see western-style education as the avenue for achieving material success. Important experiments with alternative forms are underway, but at this writing, they are not yet widely influenced.
- Most children have diverse abilities and coping skills. They are eager to learn and their parents are eager for them to learn. It is school, in effect, that destroys children's interest and that plays an active part in socializing them for outsiders.

These findings seem to suggest that the challenges facing formal schooling education have complexities rooted in effects of colonialism. The second last point above even

suggests alternative forms of education could be an answer if formal schooling education was to benefit the communities in Zambia.

A case study among the Chewa people of Eastern Zambia (1993)

The second study referred to in my work is a case study conducted in Zambia by Professor Robert Serpell, the then chancellor of the University of Zambia. He describes himself as an immigrant to Africa because his primary socialization was in the West (Serpell, 1993). Serpell (1993) did his study in Katete District of Zambia over the period of 1974-1988. Katete is the headquarters of the Chewa people. The boys and girls used in this case study use Chichewa/Chinyanja as their familiar language or mother tongue.

The study focused on anticipated and actual outcomes of various amounts of schooling (ranging from none to a full secondary and tertiary program. The study was among cohort of some fifty boys and girls born into a Chewa community and their ages ranged from six to fourteen. This thesis has focused on the Chewa people as seen in the preceding chapters and was conducted in the same area of Katete.

Serpell (1993) used adult residents of the same villages to assess the pupils. The assessment was in terms of the following:

- Endogenously valued dimensions of intellectual and social abilities and disposition.
- Performance that was measured on a set of locally developed tests of verbal and non-verbal intellectual skills, designed to tap dimensions of ability which are valued as development in the Chewa community.
- Over the ensuing years, records of school attainment were collected for those who entered school, and family discussions were held around broad questions of how parents constructed the respective socialization responsibilities of school and home. This was also based on specific considerations impinging on the decision whether a given child should be enrolled in school and if so how long she or he should continue to attend before withdrawing from the program.

Of great importance to this thesis is the way Serpell (1993) identifies three agendas of schooling. He holds that the process of education, institutionalized in schools of various sorts around the world hopes school to promote economic progress, the transmission of culture from one generation to the next, and the cultivation of children's intellectual and moral development.

Serpell (1993) refers to the three agendas above as the economic, cultural and pedagogic agendas of schooling. Based on the findings from the case study conducted, the conclusion for the anticipated outcome was that schooling is expected by both the communities and pupils, to promote economic progress, where its graduates must be given jobs. This assumed role is not compatible with the idea of providing education for all. It, instead, creates the need to control the expansion of education to correspond with the actual levels of economic development and the demand for skilled workers. Failure to do that creates a dilemma many African countries have found themselves in as reported by Buchmann (1999:117).

Many African states have been able to 'spark' enormous demand for schooling and rapidly expanded school enrolments in the post-colonial era. In light of limited growth in the wage employment sector, overabundant demand for education has translated into high unemployment, high education expenditure, and devaluation of educational credentials in many African countries. The result is that 'elites and local villagers alike come to realize that mass schooling is simply a symbolic device holding little utility in actually providing new opportunity.

Those who fail to find jobs and go back to their communities or villages, are considered misfits and become subjects of ridicule. They become a point of reference by those families who withdraw their pupils from school. Those who find themselves in such a dilemma feel betrayed by schooling for keeping them away from their communities for so many years and fail to reward them at the end. Serpell (1993) has acknowledged that educational programs have, in practice, consistently fallen short of an ideal synthesis. In summary Serpell (1993:3) holds that:

In contemporary African societies- as in many other parts of the Third World - the economic and cultural agendas of schooling often come into conflict. The conclusion is that the greater the degree of alienation between the culture of a child's socialization at home and the culture of schooling, the greater the resulting discrepancy between their goals. The pedagogic agenda of schooling is lost once the school curriculum is designed in a manner alien to the cultural assumptions informing other socialization practices to which its students have been exposed.

I support the view that the pedagogic agenda of schooling is lost when the cultural assumptions of the child are ignored. Children in such situations feel lost and some withdraw from school. Most of those who do so, but make it in the village through farming and cattle rearing, do not regret their decision. Their decision appears justified when they see that those who finished school have no jobs and no cattle at the same time. Commenting on parents who assign other duties to their children like

fishing or farming rather than encouraging them to continue with schooling, Serpell (1993:12) says:

My contention, however, is that parents who assign such responsibilities to their children are not delinquent or abusive parents who do not care about their children: they are reacting to the situation where they see the local school as being in the business of producing failures. They ask themselves, 'what is the benefit to my child of going to school? And some of them ask themselves the (perhaps higher-order) question, 'what is the benefit to the nation of my child going to school?

The questions raised in the quotation above were echoed by many respondents in this research. This could be an indication that the issues raised then are still alive and problematic.

In his analysis, Serpell (1993) uses the metaphor of journey. He treats schooling as a life-journey in his research work. There are various interpretations of schooling in various individual's life journeys. While some focus on the intrinsic value of this life journey, others focus on arriving at a particular destination (finding a job). To the Chewa people and other African groups of people, the latter value (finding a job after years at school) is what acts as a big indicator of quality education. Once this is not achieved, then school has lost value. Serpell (1993:12) further summarises his findings on the type of schooling going on not just in Zambia but Africa and elsewhere:

The project of universal primary education has captured the imagination of politicians and social planners as a major contribution to national development in many if not all the nations of the Third World in the twentieth century. Yet the project is confronted with a moral trap. Stated in its simplest form, the trap is for the school to find itself in the business of producing failures.

Serpell (1993) offers a suggestion that could help schools come out of this trap and be vehicles for reaching the EFA goals. He suggests that:

We need to 'unpackage' the concepts of schooling, education, and children's development, and to recognize the historical context from which the present patterns of institutionalization of schooling in Zambia have evolved. We need to acknowledge, on the one hand, the intrinsic coherence of the evaluative principles guiding the socialization practices of families, say in rural Chewa society. On the other hand, we need to understand the logic of the pedagogical principles informing the school curriculum and to acknowledge certain distortions and inconsistencies in the way those principles are currently instantiated (Serpell, 1993:22).

The recognition of the role of family in the early childhood education seems to have been surrendered to formal schooling alone and this could be one of the distortions referred to in the quotation above. Findings in this research corroborate with the

literature review on the importance of the role of parents in providing early childhood education (see Figure 20). Establishing mechanisms by the Ministry of Education to support the Chewa family arrangement in providing early childhood education could enhance the achievement of EFA goal number one (see Figure 1).

The introduction of a ‘localized’ primary school curriculum (Pilot project in selected primary schools and a Teacher Training College in Zambia)

During my field work, I learnt that the Ministry of Education (MOE) was piloting a program that aimed at integrating community studies (what I call AIKS in this research) into the primary school curriculum to produce a ‘localized curriculum.’ The Community Studies are composed of a number of practical and occupational skills (see Figure 27) which are to be integrated into the formal school curriculum to form this localized curriculum. Some of the comments from the guideline documents prepared by the Curriculum Development Centre (CDC) and MOE, justifying the need to have a localized curriculum, are presented below:

One of the changes in the education system has been the introduction of community studies. This learning area aims at imparting knowledge, skills, positive attitudes and values to the learners within a locality for individual and community sustainable development (MoE, 2005:11).

The quotation above from a policy document raises a contentious notion that seems to suggest that the community studies (AIKS) are to be imparted into learners when the learners already have the knowledge learnt informally. Such suggestions create an impression as if teachers must first have a body of knowledge called ‘community studies’ (or AIKS) to impart on their learners who have a deficit of it. The proposed participation of members of the community in “curriculum planning, development and implementation” (MoE, 2005:1) is with the belief that they already have the knowledge which they have passed on to their young. All the teachers need to do is to build on that knowledge and skills and create an enabling environment for pupils to use them in school. My assumption is that it is the bringing out what one has acquired informally and sometimes unconsciously (Rogers, 2003) to consciousness which is being misinterpreted to mean ‘imparting.’

While the choice of the term ‘community studies’ could be hailed, we can argue that the other term ‘localised curriculum’ need to be revisited. Currently the word ‘local’ has negative connotations. Calling a curriculum ‘localized’ or ‘local’ would not be a

good idea at all. In Zambia, and possibly in other developing countries, any product labelled 'local' is considered to be of sub standard e.g. 'local court' is lower than 'high court'; 'local maize' or 'chickens' are inferior to the hybrid ones and 'local footballers' are considered second class to the highly rated 'professional' ones. Generally, the term 'local' is stereotyped as 'low' or substandard. Similarly, a 'localized curriculum is likely to be treated in the same way. There is also the danger of limiting the term 'local' to mean a geographical position rather than knowledge being culturally and ecologically situated (Bicker *et al.*, 2004) (see chapter four for Local knowledge).

There is also lack of wider consultation with other stakeholders like the traditional leaders on what these community studies should include. This is contrary to the guidelines in the pilot manual, which say:

The local community will have an opportunity to participate in the planning, development and implementation of the Localized Curriculum, to be designed by the school in consultation with local authority (MoE. 2005:1)

Sillitoe *et al.*, (2005) support the importance of wider consultation in research involving IKS. (See chapter three). The four Chewa chiefs and their counsellors interviewed in this research, for example, had no idea of this pilot program. At the time this program is being piloted, there is very scanty training on the part of teachers (just few hours of sensitization on community studies). Some teachers in focus group discussions (See chapter six) revealed the challenges they were experiencing during this pilot phase. While the use of elders and traditional leaders is proposed, there is no mention of how these people were to be identified and later be remunerated (See Figure 35). What I would argue to be a vital missing point about this involvement of elders (parents) is their main functions once in the school. Dekker *et al.*, (1993:153) describe the various functions and roles parents can play in the school:

- Spectator (observing what the school does with their children).
- Accessory volunteer (to be involved at a particular time and on specific task).
- Resources or workers in the classroom (helping in developing resource materials and curriculum ideas or sharing their experiences).
- Policy makers (participants whose decisions affect the schools their children attend).
- Teachers (assisting as teacher aids depending on their qualifications and availability).

- Collaborators and problem solvers (reinforcing the school's efforts with their child)
- Audience (attending and appreciating the school's and their child's performance and productions).

The document on these community studies (MoE, 2005) does not explain the nature of involvement required on the part of parents and other community members in school. However, majority of the respondents in this research seem to limit themselves to the first point (spectator), which I would say is not effective.

Despite all these challenges, the piloting of this program justifies the importance and timing of this research. Some of the observations made during the interviews with the coordinator of this program e.g. piloting the program in a rural and urban teacher training colleges, involvement of traditional chiefs in identifying components of the community studies and looking at the formation of this localised curriculum beyond a primary school but at either district or provincial level, are already being considered (See chapter seven).

Other Research on IKS and AIKS

The following are other works in IKS done in Africa and elsewhere:

- AIKS on forest conservation among the Oromo people of Ethiopia. The findings are that the Oromo people give certain trees human names. This is to prevent them being cut down (Kelbess, 2005).
- Findings by the African Mathematical Union based in Mozambique on how basket/mats making by women and out of school boys and girls shows practical skills and maths concepts in use and how these would be brought to the classroom (Gerdes, 1994).
- Using AIKS to strengthen local governance and counter urban inequality in Nigeria (Nwaka, 1999).
- Use of AIKS to solve land problems in Mozambique after the civil war. Where customary law was used, land related disputes were resolved (Gerdes, 1994).
- Study on Forbidden Images: Rock Paintings and the *Nyau* Secret Society of the Chewa people of Eastern Zambia and Central Malawi (Interpretations of these masks and paintings have shown that they serve important historical, moral, spiritual, cultural, social and political roles). (Phillipson, 1976; Schoffeleers, 1976; Smith, 1994; 2001) (see chapter four).
- A study from Senegal on adult learning in a non-Western context concluded that the education programs in African villages would be most effective if they were woven into the social-cultural fabric of the community (Diouf *et al.*, 2000).

The research studies and other writings given above show the important roles AIKS can play (Coombs, 1975; Clarke, 1979). This research is an investigation of possible solutions to what both Leacock (1976) and Serpell (1993) identified as shortcomings of education and schooling. It is interesting to see that issues on the relevance of schooling and education which rose in 1976 (Leacock, 1976) and 1993 (Serpell, 1993) are still alive over so many years later. The alternative forms of education to the western style education that Leacock (1976) was sure were under way then, are still not there yet and hence the significance of this research. Serpell (1993) study, for example, has exposed the weakness of schooling and how various reasons for schooling affect the progression and completion rates of pupils in schools. The other works on AIKS emphasize the need to hybridize these forms of knowledge with the western oriented school curricula followed in many developing countries to enhance the achievement of quality education. This is why Kolawole (2005:15) advises that:

National governments in the South have the onus of developing and integrating local knowledge into curriculum systems in order to enhance sustainable development

It is interesting to note that in South Africa, it is compulsory to add 20% percent of IKS in each school subject (Kolawole, 2005).

The Research Gap Addressed

No research has been conducted in Zambia on how AIKS can enhance the achievement of Education for All (EFA) goals. The significance of this research, therefore, is that it is the first of its kind in this area. This study departs from most of the previous studies on AIKS. Other than just identifying important aspects of AIKS, this study goes further to look at how these aspects can be used as tools to enhance the achievement of EFA goals. This research, therefore, focuses so much on the need to have quality education, a goal that has influence on all other EFA goals. While other researches have only sampled teachers, parents and pupils, this research has taken a holistic approach by including even the traditional chiefs and local leaders, perceived by many people to be custodians of the Chewa AIKS (see Figure 21). In other words, many research works cited above aimed at answering the questions, 'what is AIKS and why should it still exist? This research goes further to look at whether the inclusion of the Chewa AIKS into the formal school curriculum could enhance the provision of EFA goals. It further tries to find out frameworks that could be used to

see how the two would work together to provide education to all. This research could not have come at any better time than now when the Zambian government is making efforts to introduce into the primary school what is known as a 'Localized Curriculum'. This curriculum will be a hybrid of community studies and the core subjects in the formal school curriculum. The Guidelines for the Development of the Localised Curriculum in Zambia Module reads in parts:

Basic Education in Zambia is undergoing a reform process in order to provide quality Education. One of the changes has been the introduction of Community Studies. This learning area aims at imparting knowledge, skills, positive attitudes and values to the learners within a locality for individual and community sustainable development. It is expected that the outcomes will enable schools and communities to develop their own localized curriculum relevant to their local situation (MoE 2005: ii-v).

The quotation above raises a number of contentious issues and in some cases erroneous assumptions that teachers will be imparting knowledge from these community studies into the learners yet these learners already have knowledge of these skills but is ignored by school. The community studies are fragmented as each school is expected to come up with its own. Paradoxically, in this MoE document (MoE, 2005) curriculum 'experts' have already produced a list of community studies they expect schools in the country to follow (see Figure 27). The involvement of parents in teaching these skills is highly over simplified and ignores pedagogical implications involved as suggested by Croft (2002) and discussed in chapters six and seven. This pilot program of localizing the curriculum is not backed up by any research. The findings of this research may not only provide further guidelines to this important work but also act as resource material during its evaluation and implementation.

IKS and Globalization

Globalization is interpreted in many ways by various scholars and researchers. Mazrui (2001) interprets globalization in three divergent ways:

- An economic interdependency across vast distances.
- Information availability and movement across vast distances.
- Reduction of the world into a global village.

Mazrui (2001) further identifies two forms of globalization namely economic and cultural. The main players in the economic globalization are the transnational and multinational corporations seeking to extend the horizons for their markets for raw

materials. The cultural globalization on the other hand contributes to the erosion of indigenous cultures and indigenous languages. Moahi (2007) views globalization as the opening up and interconnectedness of the world. He argues that when this opening up is all about empire building, search for raw materials, and new markets (Mazrui, 2001), then the process of this globalization could have its roots in colonialism. Colonialism had the same driving forces as those stated above. The fears expressed by some academics (Mazrui, 2001; Odora, 2002; Moahi, 2007) are that just as colonialism displaced many people from their cultural lands, plundered cultural objects and many artefacts and adversely diluted the rich cultures of the colonized people, globalization may, in subtle ways, do the same to IKS.

We can argue that the building of this global village is on an uneven ground. There is a mismatch in political and economic powers of those striving to enter the global village. It is the more powerful countries in the north that seem to be gaining more than those from the south in this globalization. Odora (2002: on line) has concluded that Globalization "has put fishes and sharks in the same pond." However, there seem to be some contradictions in the threats perceived to be facing IKS. Odora's (2002: on line) argues that globalization aims to dilute or even kill IKS. Nyamnjoh *et al.*, (2007: on line) claim the real threat is the commercialization of the IKS. They say that:

Globalization has commoditized and privatised knowledge, resulting in the knowledge economy. Knowledge that was in the public domain, owned by communities and passed down from generation to generation, has been privatized by applying intellectual property rights that confer rights on individual, effectively robbing whole communities.

My argument is that IKS faces both threats i.e. the killing of some aspects considered (by the global corporations acting as the knowledge gate keepers) harmful and commercializing those that are of an economic value to them. The latter threat is subtle as real owners of the knowledge may think they are benefiting when they do not to the extent that global capital does. This unfairness is seen in the example cited by Nyamnjoh *et al.*, (2007: on line):

Women may weave baskets in Botswana; sell these to a middleman who conducts brisk trade in supplying some global partner who makes much more money than the women will ever see from products of their own knowledge and hands. As the knowledge economy spreads its tentacles, it begins to displace IK from the hands of its owners, the communities. The knowledge is then 'reconfigured' in response to the asking and dictates of global capital.

This unfairness could be done even at a lower level. The perceived owners of the AIKS may benefit less than the consumers of that knowledge (see chapter six for an example where the end products of the wild seeds the women of Swaziland collect in the forest for sell to middle women are sold at a much higher price than the seeds were. Worse still, the middle women may even claim ownership of that local knowledge on the uses of those wild seeds).

Theoretical Frameworks and Theories of Analysis

Various researchers base their works on particular frameworks and theories (Goffman, 1974; Silverman, 2005). The main purpose of doing this is to use these theories and frame works as beacons that should guide them in their work. In addition to providing guidance, these frameworks also act as controllers of particular research works being conducted. In this thesis, I have used a number of frameworks and theories. I have categorized them as preliminary theories and main ones. The two categories have complemented each other in offering guidance and some control to this work so that I remain focused on the objectives of the research, which is to investigate whether or not the Chewa AIKS can enhance the achievement of EFA goals.

Preliminary Theories:

Curriculum Inquiry and Indigenous Literacy

Curriculum inquiry is a method, which explores the formulation of curriculum policies, curriculum programs, and the enactment of these policies and programs into classroom practice (Semali *et al.*, 1994). Most developing nations follow the assimilationist curriculum model. These are curricula inherited from their colonial masters, like Britain in the case of Zambia. In such curricula, knowledge consists of an independent body of facts that can be assimilated and transmitted through a good teacher and by means of thorough coverage of specific textbooks (Semali, 1999). The focus in these curricula is on abstract and universal stocks of knowledge to be mastered, memorized and reproduced at the time of selection examinations (Allchin *et al.*, 1999). In such situations, pupils are unable to apply what they learn in the classroom to the context of the community or village. This is often to the surprise of the members of the community who expect so much from such pupils (see chapter

one). In the case of the Chewa AIKS, pupils already have the knowledge learned informally. All that pupils need to do is use it, build on it and integrate it with classroom knowledge where possible. Curriculum inquiry and indigenous knowledge bring ideas that are aimed at encouraging curriculum developers to rethink about education and schooling and begin a new path which departs from foreign interpretations of what is important to be included in the curriculum at the local level. The objective of this inquiry is to examine the kinds of information, which form the body of knowledge that becomes the source of learning and teaching. Hawkins *et al.*, (1987:249) suggest that:

Knowledge develops as a result of interaction between an individual and his/her environment in much the same way that biological organisms are biologically adapted to their ecological space. The child is surrounded by a rich cultural setting called objects and events. These objects and events are crucial in the construction of knowledge that the subject brings into the classroom.

This inquiry lays ground for the establishment of curricula of excellence in order to meet the needs and aspirations of the people. The inquiry values indigenous knowledge that children bring from their communities to the classroom. In support of this view, Kroma (1995) argues that one way to value indigenous knowledge in science, for example, is through the integration of indigenous knowledge of botanical resources in the science curriculum as a critical means to explore and discover scientific concepts and inquiry procedures. The assumptions here are that when pupils or students can bring into science laboratories their existing knowledge about local plants, birds, water sources, local conservation techniques, medical herbs, pest control, hygiene, local ways of predicting weather patterns, local sexual education etc such efforts demonstrate the production of alternative ways of knowing things and keeping alive alternative forms of knowledge production. George (1995:48) suggests that teachers should be encouraged to

Become familiar with indigenous knowledges that manifest themselves in local history, traditional stories and folklore so that they are able to recognize knowledge and reward the pupils who bring this form of indigenous knowledge to the classroom rather than punishing them [ignoring it].

However, George (1995) only talks about aspects from the surface culture and ignores those from the deep culture. I would rather teachers were encouraged to look out for all aspects that depict people's way of living as propounded by Barnhardt *et al.*, (2005) in their Iceberg Cultural Model (see Figure 9).

Writing on Zambia, Snelson (1974) states that Zambia has for many years implemented changes in her educational curriculum from principles and practices established by trial and error. Snelson (1974:286) summarises the wishes of many developing countries fighting to provide quality education to all.

One would like to see the Zambian curricula continue to develop cautiously and introduce changes after close consultations between all those primarily responsible for planning national development. One would hope that with time the traditional subject-dominated approach to the curriculum will be discarded in favour of an integrated curriculum covering broad areas such as practical skills and the development of a closer relationship between the school and the community and the implementation of the community school idea where the school becomes a focal point for all the community and cultural needs of the people. One hopes too, that further thought will be given to determining how some of the valuable elements of traditional education (AIKS) can be incorporated into the modern school.

What Snelson (1974) is advocating for is what other scholars (George, 1995; Mahia, 1995; Sillitoe *et al.*, 2005; Kanu, 2007a) call a 'negotiated curriculum' through dialogue involving various stakeholders. These are the wishes that are yet to be achieved and wishes this research has tried to investigate.

Taxonomy of Educational Purposes

Taxonomy is a word originally associated with biology, which denotes "a system of classifying plants and animals." This could be on the basis of class, family, order or species. In education, however, the term "seems to mean any systematic organisation, arrangement or division of ideas" (Barrow *et al.*, 1980:295).

Knowledge of the purpose of education to be offered to children is an important aspect that has to be given in an organised manner. This is a point to be considered by any curriculum developer. Illich (1971) in Dore, (1980:137) gives out seven taxonomies of educational purposes:

1. End-in itself learning (to acquire knowledge or skills as an end in themselves because the process of mastery gives pleasure).
2. Duty learning (to acquire knowledge or skills because it is a moral duty to God, society or to oneself) to develop one's full capacities.
3. Pleasurable use learning (in order to be able to use the knowledge because the open-ended exploratory use of acquired skills is a pleasurable goal in itself).
4. Self- regarding achievement learning (in order to be able to use the knowledge instrumentally, in order to win power over others or to gain income from others, or to win respect from others by skilful performance in the use of skills learnt).

5. Self- regarding qualification-seeking learning (in order to use the knowledge by virtue of qualifications gained through tested learning, and the weight the institutions of society place on those qualifications).
6. Snob learning (because knowledge or skills acquisition gives one prestige)
7. Society-regarding achievement learning (in order to use the knowledge instrumentally, in order to make one's community, or one's nation a better place).

Rogers (2003) gives three forms of education offered to adults and they seem to summarize the seven taxonomies above into three forms of education namely:

1. Education designed to enrich the lives of the 'people', to make them happier where they are.
2. Education aimed at helping some persons to escape from their existing (marginal and /or necessitous) way of life into what is seen as a more centrally located or richer one.
3. Education that seeks to help some people change the society in which they find themselves (Rogers 2003: 3).

These taxonomies of purposes of education show that AIKS could be more of taxonomy two and seven although elements of the other taxonomies could also be identified. The formal schooling, as followed in Zambia and many other developing countries struggling with EFA goals, seems to be more of taxonomy four, five and six. These three purposes of education do not seem to support the achievement of EFA goals as they are individualistic and thrive on few numbers ascending the educational pyramid. And the so called failures are, in reality, not failures but what Serpell, (1993) calls 'push outs'. Describing the education pyramid in Zambia, Serpell (1993:9) says:

Thousands of pupils every year are automatically denied opportunities to continue with their schooling at various levels due to sheer unavailability of space in the narrow upper section of the educational pyramid. Public discussion of the issue in Zambia has given rise to the neologism 'pushed outs' as a more appropriate catchphrase than 'drop-outs' for referring to those pupils who do not complete the full twelve-year curriculum.

More often than not, the 'push outs' go back into their communities half-baked (Kelly, 1999) and unprepared to meet the challenges of life outside school. Hence the warning given by Rogers (2003:3) to providers of education:

We need to decide whether the education we provide for adults [our pupils] is to help them reconcile themselves to their lot in the slums [shanty compound or rural areas] in which they find themselves (make them happier); to help a few of them to escape from the slums [shanty compounds or rural areas], or to help those who live in such areas develop in their own ways rather than in our ways.

Dialectical Modernisation Theory

Dialectical modernisation theory asserts itself within anthropology and political science. This approach retains, from the classical modernisation theory, the division of social phenomena into two categories: traditional and modern. Very important to this research is the fact that this theory further retains the basic idea of development as a process whereby society adopts more and more modern elements. The key point is that this theory underlines that tradition need not impede development. It holds that some traditional institutions may even promote development by ensuring a smooth transition from old practices to new ones. A reminder given is that modern institutions, on the other hand, when implanted in a traditional setting may sometimes restrain development or perhaps come to function in opposition to development (Martinussen, 1997). This theory stresses that:

Modern institutions can at times obstruct development and perhaps not even function properly, precisely because they are not compatible with the traditions of the societies concerned. Furthermore, the approach emphasises that traditional societies are not necessarily stagnant but can in fact be very dynamic, heterogeneous and capable of surviving under a modernisation process (Martinussen, 1997:41).

This leads to the central idea of the traditional and modern as social phenomena in a dialectical relationship where both types of phenomena change in the process, and where the result, of necessity, is a hybrid. This theory dismisses the notion that development is something universal, defined solely by its end goals. It instead proposes an open conception of development, the contents of which has to be decided in accordance with each individual society's particular circumstances and the inclination of its citizens. In line with this study, this theory implies that even in the provision of EFA as a tool for development, both the western schooling and AIKS should be considered as important factors and neither of the two should be ignored (Martinussen, 1997). Based on this theory, we may side with Mahia (1994) who holds that between indigenous knowledge and formal schooling, there could be a continuum between conflict and dialogue and that what must be emphasised is the dialogical approach. Such an approach would work if those in AIKS develop a critical understanding of their AIKS in order to strengthen a dialogue with the formal schooling (Field, 2000). This would offer an opportunity for those in formal schooling to see how they are viewed by those in AIKS (see Figure 32) and possibly make adjustments.

Main Frameworks and Theories

Figure 9: The Ice berg cultural model



Source: Barnhardt *et al.*, (2005).

This model was developed by the Lower Kuskokwim School District of Alaska, USA (Barnhardt, 1981). Analyses of this model are so well documented in Ray Barnhardt's writings (Barnhardt *et al.*, 2005) that the temptation of calling the model Barnhardt's Cultural Model of Iceberg is very high. Ray Barnhardt has produced some of the works on indigenous knowledge systems in Alaska, with Anagayuqaq Oscar Kawagley (Barnhardt *et al.*, 1999; 2004; 2005). Raymond, Barnhardt and Anagayuqaq Oscar Kawagley, are professors at the University of Alaska, Fairbanks¹⁶. The bottom line of Barnhardt's writings on IKS is that the Native people of Alaska, like any other indigenous people around the world whose culture was disturbed and possibly distorted as well, by other cultures, have actively been looking for ways and means of integrating their way of life, in terms of values, beliefs and

¹⁶ Raymond Barnhardt's works on the indigenous knowledge systems of the native people can be accessed at the Alaska Native Knowledge Network (A N K N) developed in 1995 (Barnhardt *et al.*, 2005).

generally, their way of knowing things, into the framework of formal education systems (Nyerere, 1968; Kelly, 1999; Barnhardt *et al.*, 2005; Kanu, 2007a). This model seems to fit well into the definition of culture given by an anthropologist, Sir E. B Tylor in Peacock (1996:3) who defines it as:

That complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of a society

Kroeber (1952: on line) on the other hand defines culture as:

Patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artefacts

The two definitions above seem to show that culture could be a complex whole but operating at different levels. This fits well with the Iceberg model of culture that classifies culture into three levels. These are the surface culture, folk culture and the deep culture. The argument suggested by this model is that indigenous people are often defined by their culture. Most people outside a given culture recognize certain aspects of the people of that culture. However, it is the surface and folk cultures (the tip of the iceberg) that are easily observed and judged. There is so much deep knowledge embedded in the deep culture. This model claims that early missionaries and colonial masters in Africa, may have condemned based on the surface and folk cultures and ignored the deep cultures. This research is an attempt to dig further into the deep culture of AIKS to see whether there are aspects that can be hybridized with the formal school curricular to enhance the achievement of EFA. Barnhardt *et al.*, 's (2005) Iceberg model can be a very effective tool for anybody trying to integrate two systems belonging to two different cultures.

In their works, Barnhardt *et al.*, (2005) have tried to show so many years of educational restoration effort aimed at bringing systems and ways of knowing that have sustained the Native people of Alaska for centuries into the western educational systems. Barnhardt *et al.*, (2005:5) state that:

For over six generations, Alaska Native people have been experiencing recurring negative feedback in their relationships with the external systems that have been brought to bear on them, the consequences of which have been extensive marginalization of their knowledge systems and continued dissolution of their cultural integrity. Though dismissed and often in the background, much of the Native knowledge systems, ways of knowing and world views remain intact and in practice, and there is a growing appreciation of the contributions that indigenous knowledge can make to our contemporary understanding in areas such as medicine, resource

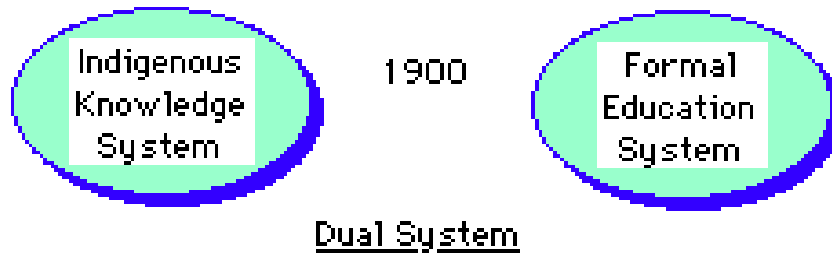
management, meteorology, biology, and in basic human behaviour and educational practices.

The quotation above suggests that Alaska took a utilitarian approach to IK since the hybridization of IKS and the formal school curriculum was aimed at making education service the community in various areas of human endeavours. The need to go beyond the surface and folk cultures and reach the deep culture, suggested in the quotation above, is vital to this research. That way we may manage to bring out people's ways of living and other aspects into the formal school curricula for the benefit of the pupils and our communities. The argument advanced here is that each of the items in the deep culture is a rich body of complementary knowledge and skills that, if, properly hybridized with the formal school curriculum could strengthen the quality of educational experiences for learners. One of the key lessons learnt from this Alaska Native Knowledge Network (ANKN) is the inclusion of native elders, curriculum developers, teachers, pupils, researchers, native community organizers, School District board members, policy makers at various levels and parents in searching deep into the cultural Iceberg and negotiating a culturally-based or indigenously- informed curriculum. The conceptual framework followed in this study (See Figure 21) borrows from ANKN.

Barnhardt *et al.*, (2005) report that from the time of the arrival of the Russian fur traders in the late 1700's, to the early 1900's the relationship between most of the Native people of Alaska and western education in the form of schooling may be characterized as two mutually independent systems with little contact. Formal schooling was primarily reserved for the immigrant population at that time. This was a dual system (See Figure 10). This situation parallels that pertaining in Zambia and elsewhere in Africa when, firstly, exposed to the European formal education influences by the missionaries in the 1800s (See chapter two). The formal education established did not take into consideration the AIKS, operating in people's everyday lives. AIKS operated more or less as an illegal entity and faced extermination, forcing other forms of it like dances, songs and ceremonies to go underground (see the Chewa 'secret schools' in chapter four). So in the case of Zambia, a dual system, as in stage 1 below was never established by the colonial government. It could be wrong, though, to assume that the two systems did not exist in people's minds (See chapter six).

Figure 10 Dual System

Stage 1:



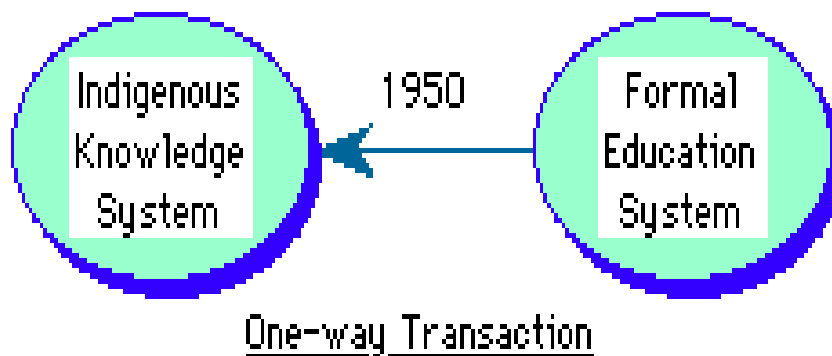
Source: Barnhardt *et al.*, (2005:3)

The main aim of the schooling in Alaska was to assimilate Native people into western society thereby creating a source of conflict of interests. Barnhardt *et al.*, (2005:3) outlines how, in due course, schooling strictly, became a one-way process. They sum it up this way:

Schooling, however, was strictly a one-way process at that time, mostly in distant boarding schools with the main purpose being to assimilate Native people into western society, as practised by missionaries and the school teachers, who often were one and the same. Given the total disregard, and often derogatory attitude toward the indigenous knowledge and beliefs and systems in the Native communities, the relationship between the two systems was limited to a one-way flow of communication and interaction up through the 1950s.

Figure 11 One-way Transaction

Stage 2:



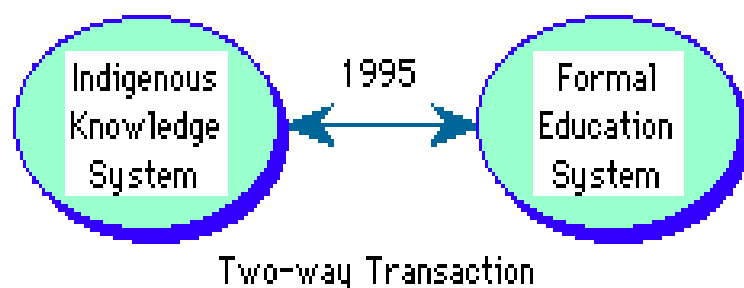
Source: Barnhardt *et al.*, (2005:4)

This situation parallels that of the missionary education in Zambia which aimed to christianise the 'primitive' and 'barbaric' Africans. The Chewa AIKS appeared the main obstacle to the achievement of this goal.

The educational reforms undertaken by the Alaska Rural Systemic Initiative (AKRSI) developments in the 1960s are of great significance to this study. Barnhardt *et al.* (2005) reveal that eventually two steps were taken i.e. the creation of elementary rural school system in Native communities under the local control for the first time and a concurrently new system of high school or secondary education. The approach taken opened the doors for the beginning of two-way interaction between the schools and the Native communities they served, as illustrated in stage 3 below:

Figure 12 Two-Way Transaction

Stage 3:



Source: Barnhardt *et al.*, (2005)

Barnhardt *et al.*, (2005) explain that while there were some levels of interaction between the two systems, functionally they remained worlds apart. The rural schools continued to produce a dismal performance record and the Native Communities continued to face significant social, cultural and educational problems. Indicators placed these communities and schools in the rural Alaska at the bottom of the scale nationally and were considered inferior to the other education system. There were also limited representation of local cultural elements in the schools e.g. basket making, sled building, songs and dances.

The representation of local cultural elements has been at a fairly superficial level with only a token consideration given to the significance of those elements as integral parts of larger complex adaptive cultural system that continue to imbue people's lives with purpose and meaning outside the school setting. (Barnhardt *et al.*, (2005:4)

These observations are a reminder to curricula developers in countries such as Zambia not to follow education reforms that are likely to introduce the kind of education

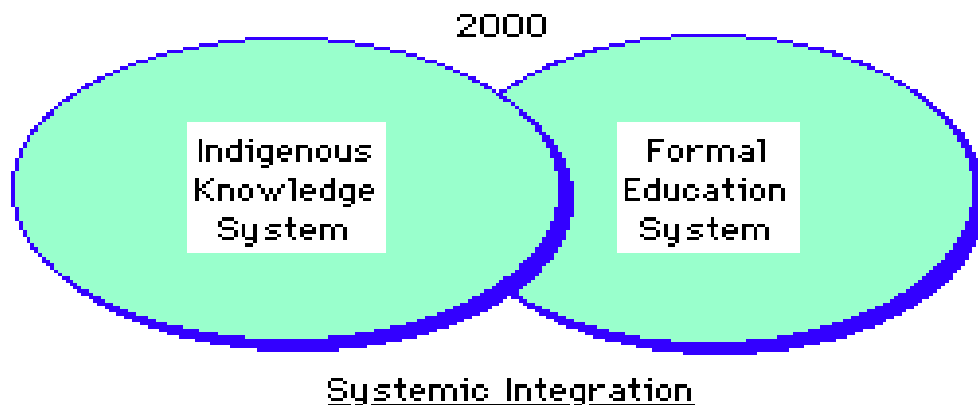
perceived by the community as sub-standard (see ESR of Nyerere (1968) in chapter two). The community self-help Harambee schools in Kenya, whose target was to reach the most disadvantaged children in an effort to offer education to all, ended up creating an imbalance two-way system. Referring to the Harambee schools Mwiria (1990:353) says:

The vast majority of our people are working constantly to ensure an education for their children. This is good, but if these children go to bad schools, without adequate facilities, [irrelevant curriculum to the needs of those children] and without qualified teachers, the kind of education they receive may not help them much in life.

However, in the case of Alaska, it was during this period of two-way system that aspects of adaptive nature were identified and negotiated by all stakeholders, leading to the development of a systemic integration as shown below.

Figure 13 Systemic Integration

Stage 4:



Source: Barnhardt *et al.*, (2005).

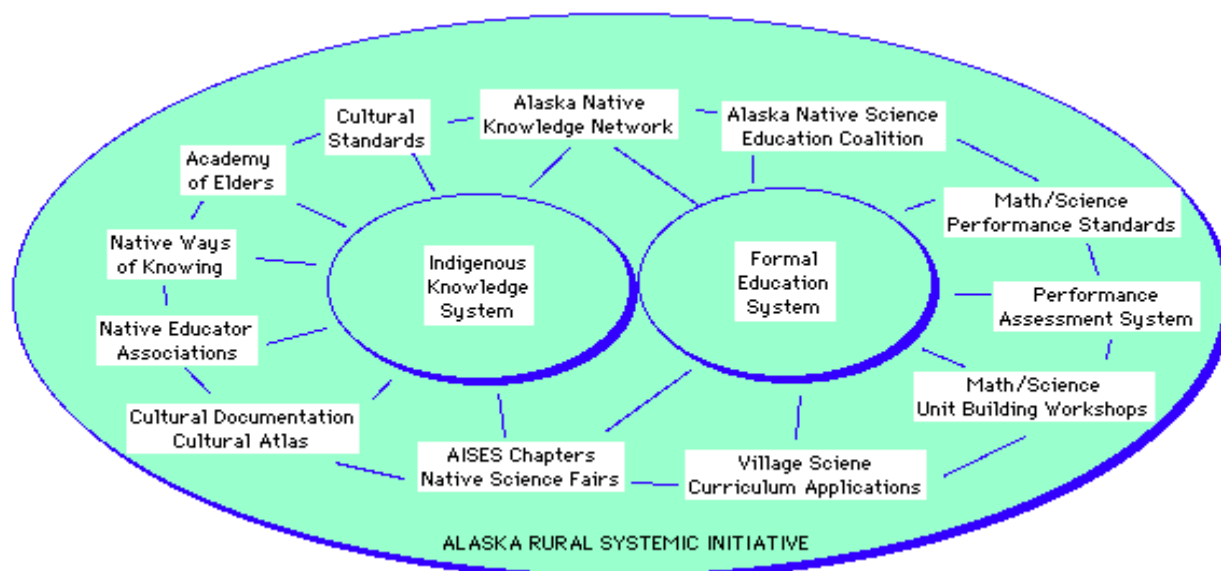
At this stage, the two systems that were separate are being integrated. At this stage we would say a much desired interconnected, interdependent, and integrated system was achieved. The desired goal was to focus on increasing the level of interconnectivity and complementarities between the two systems as explained by Barnhardt *et al.*, (2005:4):

The AKRSI seeks to bring the two systems together in a manner that promotes a synergistic relationship such that the two previous separate systems join to form a more comprehensive holistic system that can better serve all students, not just Alaska Natives, while at the same time preserving the essential integrity of each component of the larger over-lapping system.

Significant to this research is that in all these efforts taken by AKRSI, there is no mention of returning to the Alaska Indigenous Knowledge System as an alternative but a complement. Another important step taken worth noting is the identification of what they call 'attractors'. These are various agents of change ranging from Native elders, curriculum developers, quality education standards officers and others adopted by the Alaska Department of Education. Surrounding these 'attractors' are various initiatives in the field that aim to energize the 'attractors'. These efforts are aimed at making the systemic integration system operate as two sub-systems formally separated but have now become interdependent and complement each other as shown below:

Figure 14 The two education system under one umbrella

Stage 5:



Source: Barnhardt *et al.*, (2005).

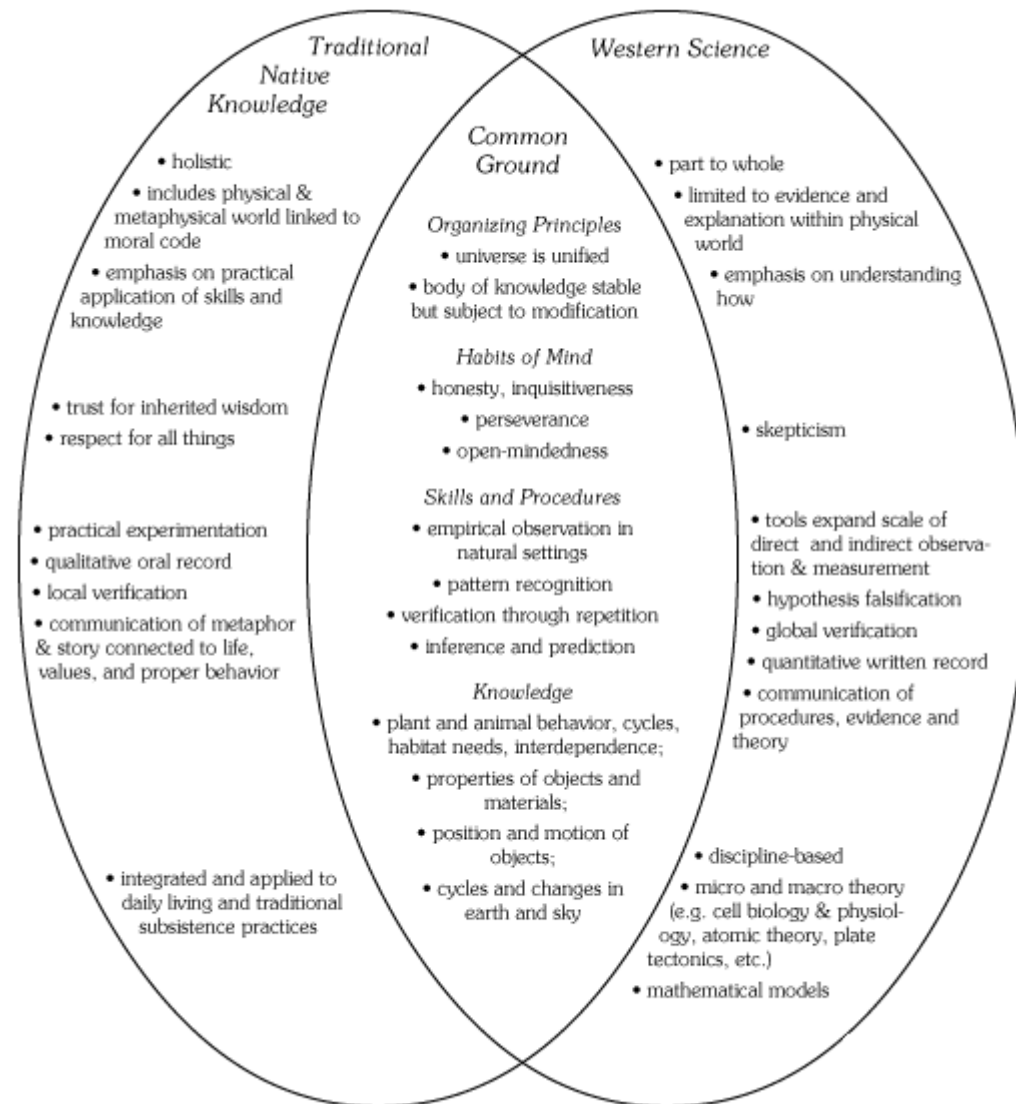
The argument of this research is to find out whether the formal school curriculum and the Chewa AIKS could be hybridized, which is like moving from stage 2 to stage 4 on Barnhardt *et al.*, 's (2005) journey. Stage 5 (Figure 14) is the ideal stage most desired by many developing countries. Barnhardt *et al.*, 's (2005) journey has shown that progress depends on how much knowledge people have of their surface, folk and deep cultures in their various Cultural Icebergs and how they appreciate and value such forms of knowledge. The summary of progress that Barnhardt *et al.*, (2005:1) give seems to show that educational reforms that aim at hybridizing the school and the community cultures can enhance the provision of education to all.

The educational reform strategy we have chosen has produced an initial increase in the student achievement scores, a decrease in the dropout rate, an increase in the number of rural students attending college, and an increase in the number of Native students choosing to pursue studies in fields of science, math and engineering. The initiatives have demonstrated the viability of introducing strategically placed innovations that can serve as "attractors" around which new, self-organizing, and integrated educational system can emerge which shows signs of producing the quality of learning opportunity that has eluded schools in Native communities for over a century.

The quotation above seems to suggest that the integration of IKS and the formal school curriculum in Alaska has enhanced the achievement of EFA goals 2, 3 and 6 (See Figure 1 for EFA goals).

The Culturally Based Curriculum Model discussed by Barnhardt *et al.*, (2005) climaxes into stage 4 of Barnhardt *et al.*, (2005) journey. This model shows the interdependence that can exist between western science and indigenous knowledge systems. In this model what are identified as 'attractors' are the common grounds (Barnhardt *et al.*, 2005) which draw the two separate educational systems together and make them work interdependently. The model shows that IKS and formal schools can negotiate a curriculum adaptable to local circumstances and needs. This is by focusing on similarities and common objectives and considering differences as motivators rather than dividers. The model (Figure 15) enables both pupils and teachers to make the connection between the formal school curriculum and the community knowledge and skills.

Figure 15 Culturally-Based Curriculum Model (Barnhardt *et al.*, 2005)



Source: Barnhardt *et al.* (2005)

Interestingly, the forms of IK in Alaska involving the minority communities are strikingly similar to those found in the community studies (AIKS.) in Figure 27. The main difference is that particular themes in this curriculum (Figure 15) are devised by various members of the Alaska community and not some ‘experts’ on a round table (See critique to the pilot program on community studies in this chapter).

Figure 16 Adedipe (2004) Systemic Hybridization strategy Framework

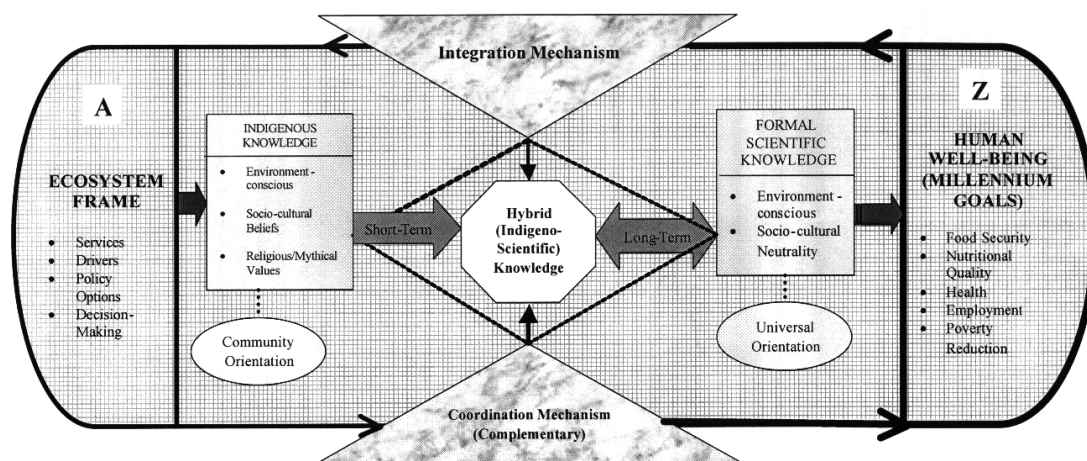


Fig. 7 Epistemological Inputs and Linkages Towards Sustainable Agricultural Research and Development Capabilities

Adedipe, 2004

The Adedipe (2004) study aimed at comparing IKS farming practices vis-à-vis modern technology in sustainable crop production in Nigeria. In his findings, Adedipe (2004) acknowledges that IKS cannot on its own meet current and future demands of crop production. The conclusion of the study was that the benefits of the modern technology should gainfully and sustainably rub on IK to achieve the human well being. The study proposes a need for a systematic hybridization strategy. In his framework, Adedipe (2004) recognises the identification of Ecosystems Services Drives and Policy Options for Decision-Making¹⁷, which he labels as (A), for the goal of promoting and sustaining human well-being, which he labels as (Z). In this framework, IK is considered as part of the essential ingredients characterized by strong socio-cultural beliefs, with a strong community orientation. This, on one hand, provides a short-term measure for crop output in third world agricultural production as also acknowledged by Ayinde (2004).

Vital to this research is the realization in Adedipe's (2004) framework of hybridization that the formal scientific base of modern technologies cannot on its produce food; but it can do so with strong recognition of the benefits of IK. This must be in terms of the thought process and the social value in order to produce a hybrid, indigenous- scientific- knowledge (ISK) and a short-term transitional phase. Of great

¹⁷ See Adedipe (2004) for details of the items identified.

interest to this research is the identification in this framework of two alternative mechanisms of the hybridization:

- Integration mechanism
- Coordination mechanism

Adedipe (2004) holds that the integration mechanism is a process of blending two systems together. In his study, integration implied the blending of IKS into the existing “scientific” or formal school procedures. The coordination mechanism, on the other hand, carries with it close interactions and collaborations between IKS and modern technology actors in terms of constructive engagements based on mutual understanding and the sharing of the benefits of new products. For a long-term success, the coordination mechanism rather than the integration of IKS with the modern technologies appears to be more realistic and enduring choice (Chambers *et al.*, 1979; Adedipe, 1984; 2004). Both integration and coordination mechanisms seem to have advantages and disadvantages. In the case of the ESR of Tanzania, they seem to have followed the integration approach, with short term success (see Nyerere’s (1968) ESR in this chapter). Agrawal (1995:3-6) argues against the integration approach to hybridization that:

The attempt to blend local or indigenous knowledge into existing “scientific” or formal school procedures falsely assumes that indigenous education systems represent an easily-defined body of knowledge ready for extraction and incorporation. Integration in education has not readily occurred because traditional educators in the community continue to be discounted as having any valuable expertise.

While the involvement of traditional educators could be vital to any integration, I would argue that what may be more important than that is the creation of a policy document on IKS which would guide this involvement as discussed in chapter six. Commenting on the use of Indigenous Technical Knowledge (ITK) Chambers *et al.*, (1979) seem to support Adedipe (2004) on the choice of coordination mechanism as the mechanism to be used in hybridizing ITK with science. The fears expressed by Chambers *et al.*, (1979: 7-8) on the use of integrating ITK and sciences are that:

When ITK and scientific stocks of knowledge come together, synthesis does not occur. One of the two things tends to happen: either the two sets of knowledge are isolated from each other, or ITK is ignored and squeezed out as inferior. This squeezing out is more common and can lead to loss of confidence among the possessors of ITK as well as to irreversible loss of knowledge. This may even undermine the foundations for indigenous participation in the process of generating new technical knowledge.

The warning sounded in the quotations above (Chambers *et al.*, (1979); Agrawal (1995) that the hybridization of ITK and science is not automatic and that there is a danger that ITK, the seemingly weaker one, is likely to be squeezed out as inferior seems be a sound warning and could be substantiated by the failure of ESR in Tanzania (Semali, 1999). In their support for coordination mechanism as a viable process for achieving long term success in systematic hybridization of ITK and science, Chambers *et al.*, (1979:8) suggest that indigenous observers might, in theory, act as “the eyes” of science:

Pastoralists, for example, have detailed genealogical knowledge of their animals, which can quickly be translated to give a picture of fertility and age-specific mortality. Knowledge of micro-environmental conditions could be used in the preparation of soil maps; local people could be consulted to determine the milk yields of animals under real conditions where scientific testing had not been carried out; indigenous observers might be encouraged to report back on changes in the composition of pasture as an early warning system for environmental deterioration; farmers could be used in crop reporting systems instead of extension personnel.

This is the view that Sillitoe *et al.*, (2005) support when they talk about the communication that must exist between IK and Science or formal school in order to enhance development. The view underpinning the Iceberg Culture model , the Cultural- Based- Curriculum model (Barnhardt *et al.*, 2005) and the Systematic Hybridization Strategy Frameworks (Adedipe (2004) is that knowledge production should be treated “as negotiated translation” and not something that should be transferred from one ‘superior’ system of education to another ‘backward’ education system as suggested by the positivists:

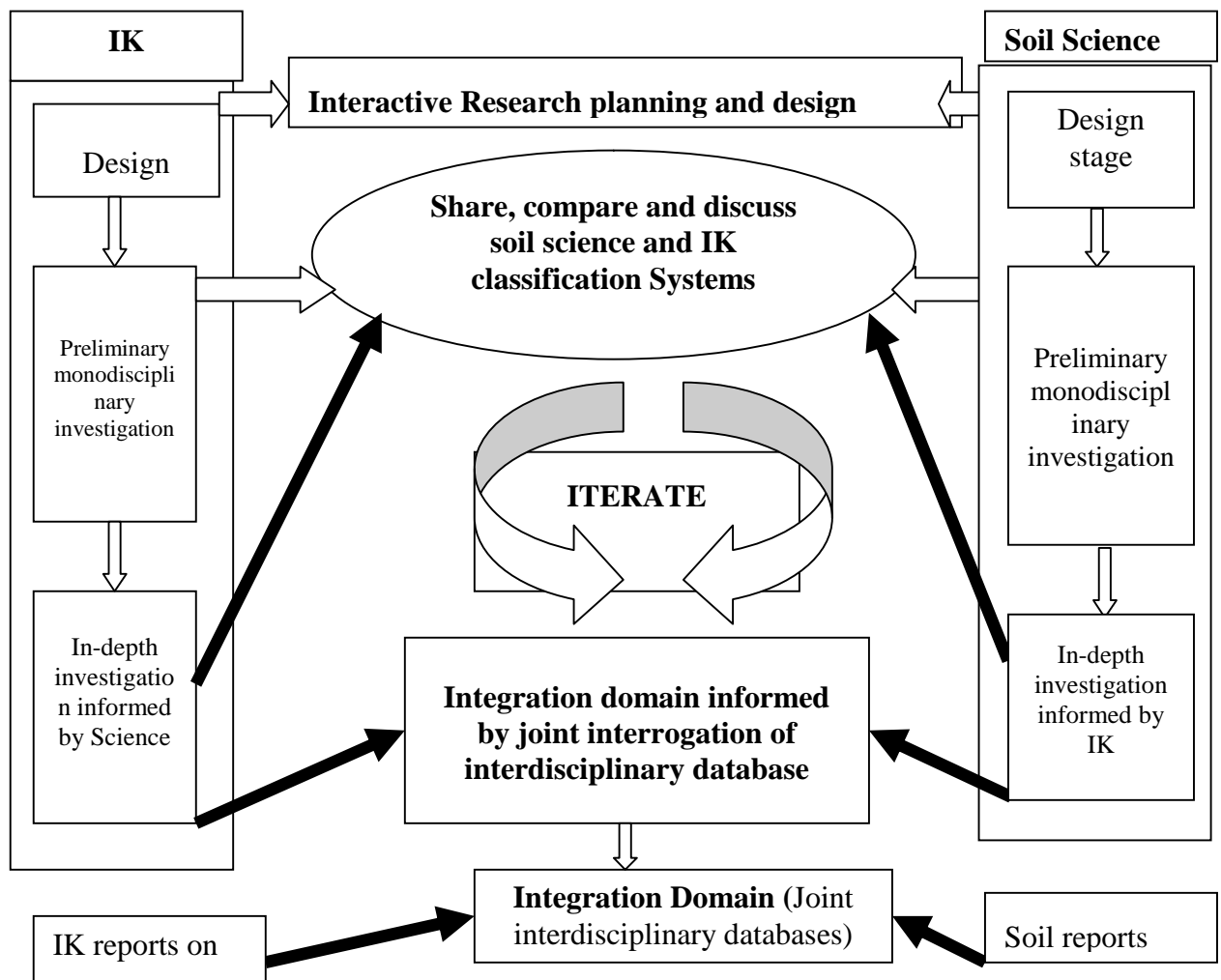
The positivist view that knowledge is unitary and systematised explains why scientists continue to regard science as superior to local bodies of knowledge, and why they believe that their superior knowledge can easily be transferred, indeed needs to be transferred, in order to replace ‘ backward’ local [indigenous] Knowledge (Pottier *et al.* 2003:15).

The approach being promoted by these various frameworks used in this study is the negotiated situation-specific approach (Pottier *et al.*, 2003) which demands a dialogue between the different parties to the interventions that are constructed to foster development. In this research, the proposed intervention is the Chewa AIKS and the much needed development is the achievement of EFA goals.

In Figure 17 below, the integrated domain has come about as a result of interactive research between soil science and IK. The interactive research entails having in-depth investigation into the deep culture (Barnhardt *et al.*, 2005). Through negotiation,

rather than mere transfer, common themes can be identified that can produce a Culturally- Based Curriculum (Nyerere, 1968; Barnhardt *et al.*, 2005). The Communication model emphasizes the importance of interrelationship and interdependency between soil science and IKS, supported by in-depth research work in both areas. Other than one education system feeding the other, we have a situation where both learn from each other. That way, both systems are interacting and reinforcing each other in a mutually positive and complementary manner. Using these science and IKS models (Barnhardt *et al.*, 2005; Sillitoe *et al.*, 2005; Adedipe, 2004) a parallel model can be drawn where we can look at the interrelationship and interdependence between schooling and AIKS and consider the achievement of EFA goals as the desired sustainable development. The questions that need answers are that if AIKS can promote sustainable development in Agriculture, soil science, and faming in general, through in-depth research in both areas, can the same results be expected if AIKS and formal school are corroborated?

Figure 17: The Communication Strategy for Indigenous Knowledge



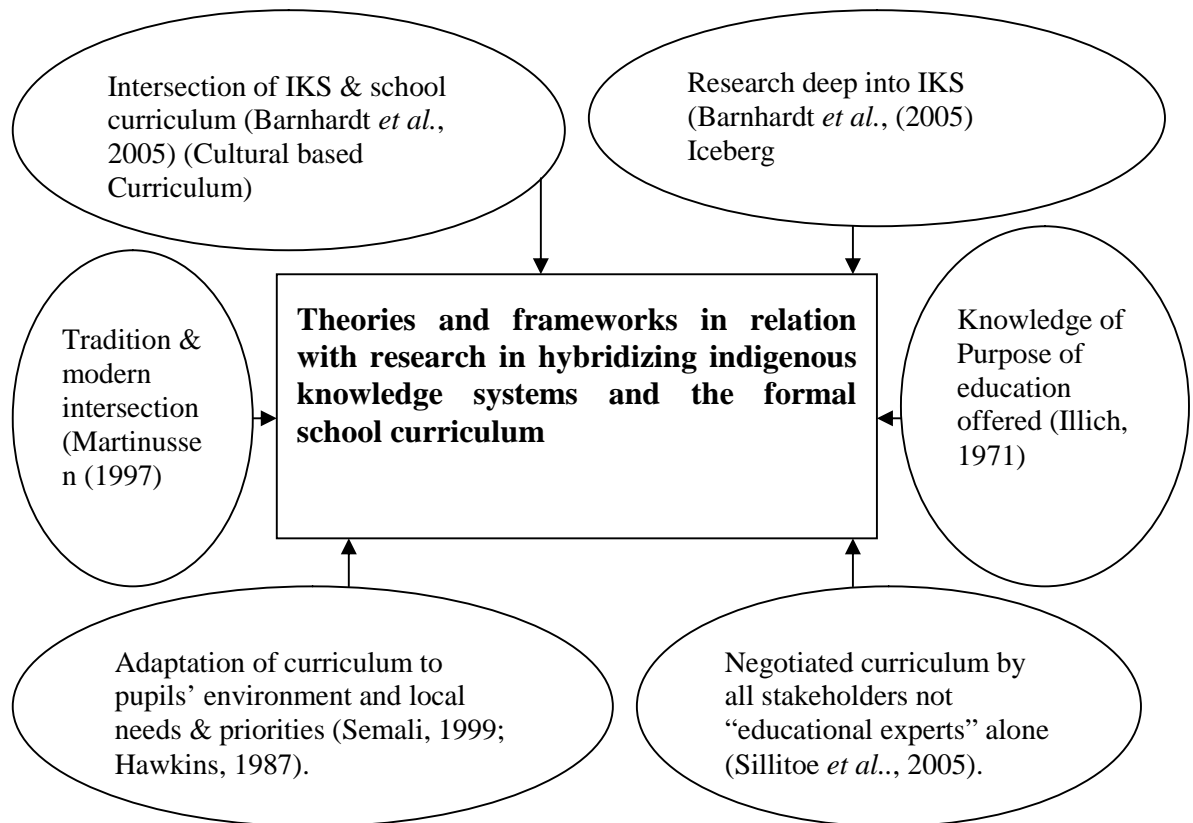
Source: Sillitoe *et al.*, 2005:84)

This model tries to establish communication as a vital tool that can ensure two or more educational systems coming together for a common good for the pupils. We could use the same model by replacing soil science with formal school and follow the same steps as outlined in Figure 17.

Summary of chapters one to three

This summary of the three chapters has acted as a break from one area of emphasis to the other. The three chapters have presented the position of the researcher in the work, (the 'me') the background of the research and the general picture of Education for All (EFA) in the context of the Zambian culture and education. The challenges and failures many developing countries have met in their fight to provide education for all since the 1990 Jomtien Conference have been highlighted in chapter two. The general picture emerging is that formal school alone especially with its curricula which climaxes in passing an examination and getting a certificate for job seeking has turned schools into 'moral traps' of producing 'failures' (Serpell, 1993). The chapter has revealed that scholars and researchers are trying to come up with alternative techniques or forms of knowledge as possible solutions. It is in this context that chapter three discusses Indigenous Knowledge Systems (IKS), Local knowledge (LK), and African Indigenous Knowledge Systems (AIKS) and see if they would provide some solutions. Considering that research in IKS needs guidance from well-defined frameworks and theories as it involves some cross-culture challenges, a number of frameworks and theories have guided this research. The general picture from theories and frameworks employed is that a curriculum should be culturally-based (Martinussen, 1997; Barnhardt *et al.*, 2005); a product of research into peoples' deep culture that depicts the way they live (concrete) and not just the surface and folk culture (abstract) (Barnhardt *et al.*, 2005); one that takes into account the local needs and priorities of the people and the country (Nyerere, 1968; Hawkins, 1987; Semali, 1999) and finally, one based on a wider communication, consultation and dialogue (Adedipe, 1984; 2004; Sillitoe *et al.*, 2005) so that pupils and the community are aware of the purpose of the education being offered (Illich, 1971). Salient views that come from these frameworks and theories are expressed in Figure 18 below:

Figure 18: Frames and Theories guiding research in the IKS and formal school curriculum.



The following chapter looks at the Chewa AIKS. This chapter identifies any common ground that may or may not exist between the Chewa AIKS and the formal school education.

CHAPTER FOUR

THE CHEWA PEOPLE: AN ANTHROPOLOGICAL ACCOUNT.

Introduction

This chapter looks at who the Chewa people are, where they came from, where they are currently found and how they are organised, as a people. The chapter also looks at their African Indigenous Knowledge System (AIKS). Emphasis is given to the culture, norms, customs, beliefs, proverbial wisdom and the general practices of the Chewa people. An attempt is also made to look at the so-called secret schools of the Chewa people. These are the *Nyau* dance and its mask for the men folk and the *chinamwali* initiation ceremony for girls who have come of age. The chapter makes an attempt to analyse how the *Nyau* and *chinamwali* 'secret schools' could be related to the formal schools. The analysis gives the overall reaction of the Chewa people to this new concept of school as introduced by the missionaries. The role the *Nyau* masks play in this form of resistance to the colonial government, missionaries and even to the *Ngoni* invaders is discussed with the use of pictures, where possible. Areas showing some elements of integration of ideas between the formal schools and the Chewa secret schools or lack of it are highlighted in various segments of this chapter. Particular attention is drawn on who made the initiative of that integration between the missionaries and the Chewa people. Overlapping similarities between the Chewa AIKS and formal schools are highlighted for possible hybridization. Finally, the chapter ends with a general critique of the Chewa AIKS and a conclusion.

The origin of the Chewa people

Between 1400 and 1800 the monarchies of Africa were organised and consolidated into kingdoms and chieftaincies. The Chewa kingdom is one of the oldest kingdoms in Africa (Tindail, 1967; Langworthy, 1969; Banda, 2002). The Chewa people belong to the Bantu language group found in Sub Sahara Africa. The Bantu¹⁸ people are said to have come from Asia and settled in the great lakes region especially around Lake Victoria (Banda, 2002). However, the idea of the Bantu people coming from Asia is

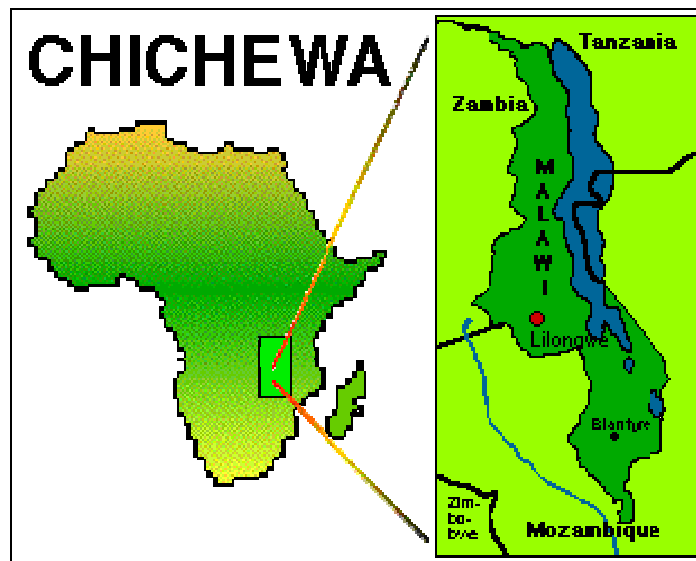
¹⁸ The Bantu people comprise of the present day tribes before their dispersion in groups to West, East, South, North and Central Africa. These are a group of people whose languages have a lot of similarities. The word "Bantu" itself is from a noun stem "nthu" or "ntu" for the word that means "people" in all these Bantu languages.

highly contested as many people believe life started in Africa. It all goes to show that there are a lot myths surrounding such issues of origins of the Bantu people (Banda, 2002). However, many people believe the Chewa people trekked southwards to Congo (Kola) in the Luba kingdom and they settled in Malambo, a place in the Luba area of Congo. They later migrated into northern Zambia, and then south and east into the highlands of Malawi. This settlement occurred sometime before the end of the first millennium (Mwale, 1973; Banda, 2002). After conquering land from other Bantu peoples, they regrouped at Choma, a place associated with a mountain in Northern Malawi, and the plateau of North-eastern Zambia. This is one of a number of different interpretations of the early history of the Chewa and is narrated every year at *Kulamba* ceremony for the Chewa people (Tindail, 1967; Banda, 2002; Mchombo, 2006). It is worth noting that:

The historical information about the Chewa and other Bantu kingdoms is largely from oral historical sources to the extent that the exact period or dates when certain events happened may conflict (Banda, 2002:12).

The larger population of the Chewa people is found in Malawi (see map below). The Chewa people speak Chewa or *Chichewa* language. These people also lived around lakes (*Nyanja*) and therefore came to be known as *Anyanja*. It could be for this reason that the *Chichewa* language is also known as *Chinyanja*. The Zambian and Malawian currencies are in the *Chichewa/ Chinyanja* language.

Figure 19: Areas where the Chewa people are currently found (Zambia, Malawi, and Mozambique)



Source: Mchombo, (2006: on line).

The Chewa Kingdom Organization Structure

The headquarters of the Chewa kingdom and the palace are at *Mkaika* in the Katete District of Zambia. The Chewa kingdom has a second palace at Naviombo in the Chipata District. This is where children of the deceased kings or paramount chiefs live.

The Chewa kingdom has three administrative organs namely the Chewa Royal Establishment, the Royal Family and the Undi Chewa Traditional Council. The Chewa Royal Establishment is the governing body of the kingdom. It comprises the executive chaired by *Kalonga Gawa Undi*¹⁹ who is patron of the *Undi* Chewa Traditional Council. Membership to the Chewa Royal Establishment and the Undi Chewa Traditional Council is by appointment by the executive, while that for the third organ, the Royal Family, is by birth-right (Banda, 2002). One notable figure within the Royal Family is *Nyangu*, the queen mother to *Kalonga Gawa Undi*. She plays many ceremonial roles in the Royal Establishment of the Chewa kingdom. The Chewa people adore and glorify her. Note that the administrative organs mentioned above are also replicated at chiefdom and village headman levels but may have different names.

There are forty-one sub-ordinate Chewa chiefs in Zambia, fifty-two in Malawi and twenty-three in Mozambique. During the *Kulamba* ceremony, the chiefs from Malawi and Mozambique send their representatives to bring their tributes and reports to the paramount chief *Kalonga Gawa Undi*. During the 2007 *Kulamba* ceremony, the Chewa chiefs from Malawi were accompanied by their republican president. The sub-ordinate chiefs are a very strong pillar and a source of strength for the Royal Establishment (Banda, 2002). These chiefs ensure that there is effectiveness in the decentralised system of administration and are perceived to be custodians of traditional knowledge, wisdom and power. The majority of the chiefs in the Chewa kingdom are male, as are all the chief's counsellors, but there are also some female chiefs. The title name for the Chewa chiefs '*mambo*' is masculine. This could imply that installing women as chiefs could be a new social transformational change in the Chewa AIKS. There are also a number of young men and some with university

¹⁹ *Kalonga Gawa Undi* is title for the paramount chief of the Chewa people. *Kalonga* means the one who installs other subordinate chiefs; *Gawa* means the one who distributes land to the other chiefs and *Undi* means the builder of the nation (Banda, 2002).

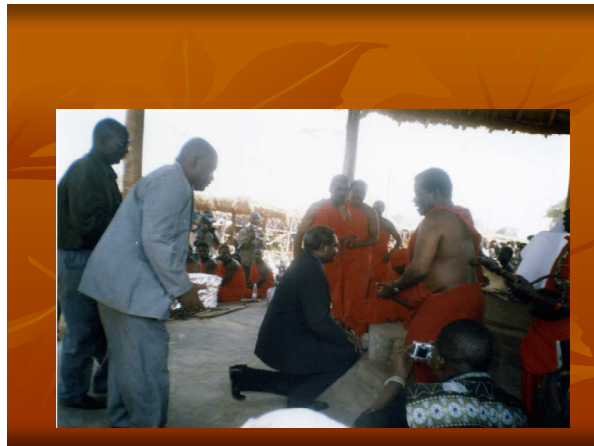
education who have been installed as chiefs. This is a departure from the Chewa norm of considering age as a sign of wisdom as a result of the perceived accumulated experiences as discussed later in this chapter.

In the pre-colonial period, these chiefs had special responsibilities and roles to play for the betterment of the whole kingdom. Their roles and functions were affinity to their royal names. The responsibilities assigned to them determined what kind of tributes individual chiefs were to bring to *Kalonga Gawa Undi* during the *Kulamba* ceremony. The following are just few examples of some title names denoting their assigned duties in the kingdom:

1. *Kawaza* (carver of tools like axes) The tributes he would bring are the carved items and tools)
2. *Pemba moyo* (Preserver of life). He was in charge of issues related to priesthood, e.g. praying for rain and the offering of sacrifices
3. *Zingalume* (Even if they (bees) sting). He was in charge of forest tributes e.g. honey.
4. *Kathumba* (The bag). He was in charge of tributes from the field e.g. maize, millet etc.
5. *Chikuwe* (Shouter). He was responsible for publicity issues or announcer during ceremonies.
6. *Mbangombe* (The stealer of cattle). He was responsible for animal tributes.
7. *Kalinda bwalo* (The overseer of a place). He was left to take charge of the land where *Kalonga Gawa Undi* left his concubine *Nyanje*, when the Chewa people were on their way from Chief *Mukuni*. *Nyanje* later got the recognition of a chief (Mwale, 1973).

These tributes were for the benefit of all the Chewa people. The paramount chief with his Royal Establishment would distribute the tributes to all needy areas in his kingdom. These tributes were like some form of tax collection for the benefit of all Chewa people. One problem the colonial government faced was the collection of tax from people. One would assume that this was one approach they could have used without many problems, as people were already familiar with it. The custom of bringing tributes to the paramount chief has continued to date. A cross-section of people of various status and tribes come to pay homage to the Chewa paramount chief *Kalonga Gawa Undi* during the *Kulamba* ceremony as seen below:

Picture 7: Individual people handing in their tributes to the paramount chief Kalonga Gawa Undi



Source: Assistant researcher during the 2005 Kulamba ceremony of the Chewa people at *Mkaika* in Katete.

In the picture above a politician and former republican vice president, in acknowledgement of the powers these traditional leaders have goes down on his knees before the paramount chief of the Chewa people, Kalonga Gawa Undi, as he brings his tributes. We could argue that these are no longer tributes (*mitulo*) but gifts (*mphatso*) for the chief. This is in line with what Sillitoe *et al.* (2005) hold that culture is not static.

The Chewa AIKS

Like many African tribes, the Chewa people had their own African Indigenous Knowledge system (AIKS) long before the imposition of missionary education by the European Missionaries. The AIKS of the Chewa people is influenced, to a larger extent, by the type of society to which they belong as a tribe. There are seventy-three tribes found in Zambia. These tribes can be divided into two societies i.e. matrilineal and patrilineal. Writing about many African societies, a social anthropologist Lewis (1976:273) holds that:

To say a society is “matrilineal” or “patrilineal” is to say very little, unless we specify in detail the relative functional significance of kinship in the total social system.

Differences between the two societies are centred on inheritance of property, land rights and ownership of children in a family. In a matrilineal society, a man’s closest relative is his sister and his most immediate heir and succession is the sister’s son, the nephew. This means that among the matrilineal societies, children belong to the mother and the uncle (*Nkhoswe*) (brother to the mother of the children). The uncle

exercises authority over the children of his sisters. His children have their own uncles to take care of them. This uncleship responsibility includes the power to send or not send his sister's children to school.

As a matrilineal society, property and land rights are inherited through the mother. Children of the same mother or descendants from the same breast (*Mbere*) make up a family of dependants (*Mbumba*). Brothers of the mothers are called Nkhoswe, the guardians of the lineage, and the mentors to their sisters' sons (Mchombo, 2006: online).

In patrilineal societies, children belong to the father. Writing about the patrilineal societies and ownership of children, Lewis (1976:237) says that:

Often the rights transferred from the wife's to the husband's kin are so comprehensive and firmly grasped by the recipients that even illegitimate children belong to their mother's husband and not her lover unless the lover pays substantial damages to the mother's husband.

This information is vital as it gives direction as to who to call to school between the uncle and the father of the child to discuss the progress of a child or persuading parents to send their children to school.²⁰ If the school is in a matrilineal society, calling both the uncles and fathers or uncles alone to school to discuss school related issues of the child may yield better results than calling the fathers alone.

The uncle (*Malume*) often looks after his sister's children. That way they are not attached to their father. As observed by Lewis (1976) the sister's children could start living with their maternal uncle even before they reach puberty and become ripe for marriage. Under these arrangements, a Chewa man in effect lends his sister to another man to produce children for him. A father who tries to gain some control over his children is quickly reminded using a Chewa proverb, "*Iwe unabwerera matako cabe pano*" (You came here only for buttock and nothings else²¹). In this arrangement, a nephew can inherit the kingship, chieftainship or village headship of his uncle. The Chewa people justify their world view by arguing that when it comes to inheriting rulership, they do not want a foreigner to rule them. So they are much more comfortable with a nephew because a sister's child will always and truly be hers. As

²⁰ The researcher is from a matrilineal tribe and was stopped school in year seven to go and run his uncle's shop and teachers at the school were approaching the father of the researcher who openly said he had no powers to undo what the uncle of his son had said as the uncle had the control over his son and he had his nephews to control.

²¹ "Buttock" is used as a euphemism as the expression literally means "you are only here for sexual intercourse and producing children".

for the man, he can never be sure. The Chewa people's world view is that it's only a woman who knows the real father of her child. The nephew can even inherit the uncle's wife in an event of his uncle dying; opportunities nephews always look forward to. One of the songs popularly sang during the *Nyau* dances depicts a nephew wishing a quick death of his uncle so that he inherits his beautiful wife.

Ine nikhumbira akazi a malume (I envy my uncle's wife).

Nafe mmangu nikalowe chokolo (Let him die early so that I can inherit her).

Organisation structure of the Chewa AIKS

The Chewa people had a well-established form of AIKS. Their AIKS had a well-set organisation structure, which had a family as its starting point and then society. Commenting on the importance of family in the implementation of primary education for all beyond Jomtien, Little *et al.*, (2001: 233) say:

Learning begins at birth. This calls for early childhood care and initial education. These can be provided through arrangements involving families, communities or institutional programs, as appropriate. The main delivery system for the basic education of children outside the family is primary schooling. Primary education must be universal, ensure that the basic learning needs and opportunities of all children are satisfied, and take into account the culture, needs and opportunities of the community.

The focus on family as a starting point of a child's education among the Chewa people is in line with the above point. The Jomtien World Conference on EFA acknowledges the importance of family participation in the learning of their children (UNESCO, 2004). It therefore emphasises family, community and school as the three ways in which a child can be reached for education (Bennett, 1993).

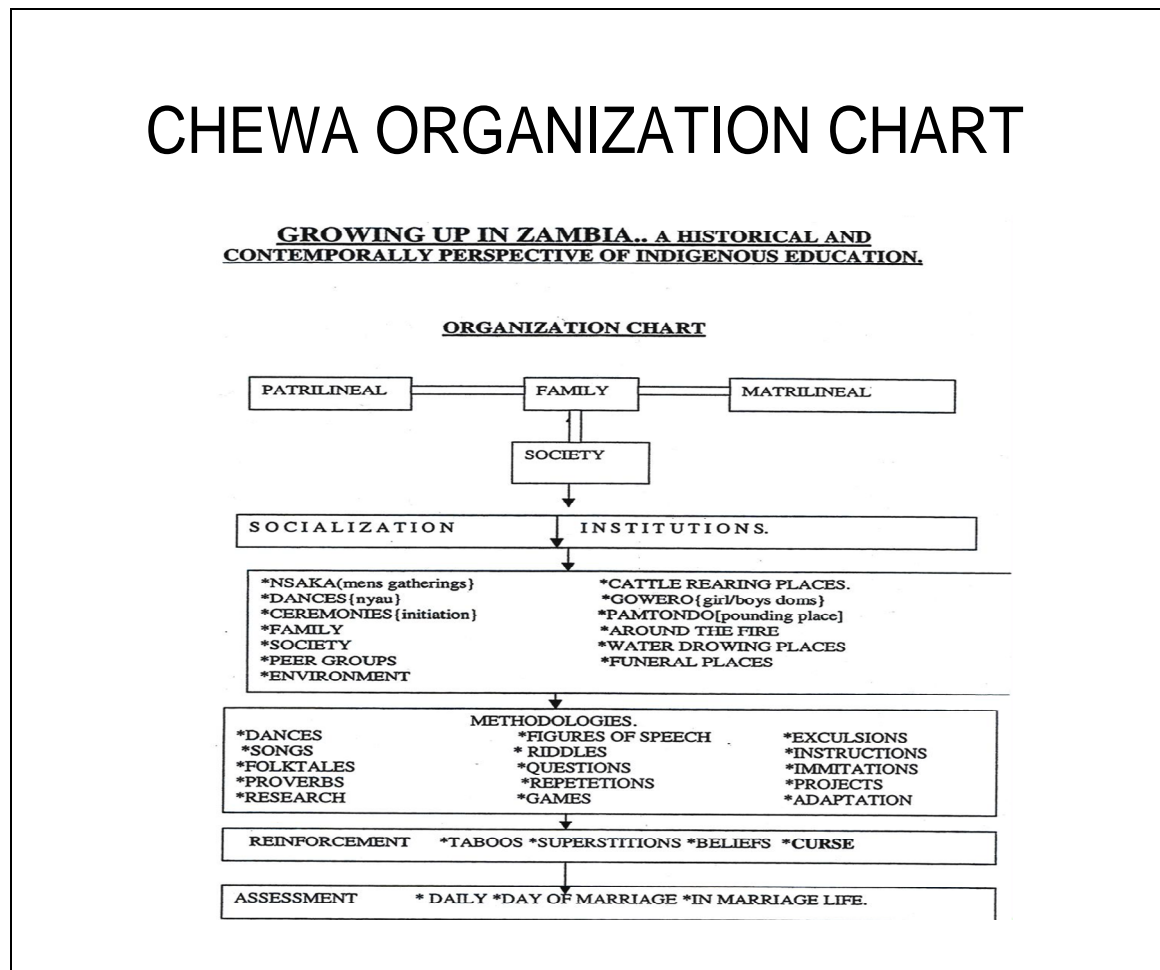
Bennett (1993:14) supports the above view on family being the focal point in the education of a child:

Parents should give their children the 'inner engines' of learning: that is personal and social skills such as confidence, motivation, caring, common sense, perseverance and a sense of team work, which enable children to learn and achieve in the school context.

The Chewa AIKS had its socialisation agents such as ceremonies, dances, peer groups, the environment, and cattle rearing places, boys and girls dormitories (*gowero*), water drawing places, funeral gatherings or places and around the fire. Some early childhood education and training on practical and life skills follow well defined stages with identified instructors (*aphungu, anamkungwi*) and established

venues such as *Kumtondo* (female's gatherings), *kumphala* (male's gatherings), *Dambwe* (*Nyau* camping usually near grave yards to ensure privacy), *Mnyumba* (secluded house for trainings girls during initiation ceremony) and *Vigubu* (trainings and rehearsals of drills for females related to matrimonial life) serving as prototype of 'classrooms' 'tutorial rooms' or 'village parliaments in the case of *kumphala* (male gathering). I would argue here that these are structures that could enhance stereotype gender roles that could disadvantage girls' education. Below is the education structure that emerges when you look at the way the knowledge was passed from generation to generation among the Chewa people:

Figure 20: Organisation structure of the Chewa AIKS



Source: Adapted from (Mwale, 1973; Ngulube 1989; Kamanga, 1996).

Its methodologies included songs, folktales, proverbs, riddles, figures of speech and oral literature. In addition, imitation, play and participation in adult activities such as fishing, hunting, agriculture, bee-keeping and house keeping were also important.

The methodologies closely followed the curriculum, which was basically task-based.

This curriculum stressed the following:

- Detailed knowledge of physical environment and skills for exploiting it.
- How to live and work with others.
- Roles in networks of kinships and relationships and understanding of rights and obligations.
- Laws, customs, moral principles, obligation to the Chewa people's ancestral spirits, to relatives and to others in the group or tribe (Ngulube, 1989).

In the Chewa AIKS, notable also is the use of a variety of educational senses by the children to learn about the world. In the formal schools, sight and hearing seem to be the education senses per excellence as observed by Classen (1999). Except for unusual circumstances, a sense like taste is in no way part of formal school as food is kept out of the classroom. Within the school, food, in form of snacks at recess or meals at lunch time, provide a break from studying. In the Chewa AIKS, eating and drinking could be full lessons in themselves and important paths to wisdom. Manners and good behaviour are inculcated into the children when they are eating and drinking. Among the Chewa people and in other African cultures, senses of taste and even smell are educational senses as well. When boys are herding cattle, they share knowledge of herbal medicine for their sick animals. During these sessions, the sense of smell is very cardinal because some roots and plants are so similar that sense of smell is the only answer. Writing about the use of the sense of smell in education, Classen (1999:273) said the following about the IKS of the *Warao* people of Venezuela:

We in the urban West presumably do not need to be able to distinguish our medicine by smell; it is enough for us to be able to distinguish the labels which identify the (packaged) medicines. For this we require only the visual skill of reading. In Western societies, not knowing how to recognize the right medicine by reading the label might be fatal. Among the *Warao*, not knowing how to recognize the right medicine by smell might be fatal.

In the Chewa AIKS, taboos, beliefs and superstition are used to reinforce the knowledge acquired. Breaking a taboo had well defined consequences that were feared and respected by all. This means that punishment and fear were widely used as motivators for learning and behaviour (Ngulube, 1989; Kelly, 1999). Below are some taboos that are used in the Chewa AIKS:

Table 3: Taboos and their perceived consequences

1	Infidelity by husband when the wife is pregnant or baby is still too young.	1	Wife will have prolonged labour/baby will be 'cut' (Mdulo) i.e. die of cough.
2	Infidelity by wife during pregnancy.	2	Bridged pregnancy/turning yellow when sees baby.
3	Boys having sex with elderly girls or old women.	3	Their genitals will shrink, broken or bitten
4	Boys touching pots or doing house chores in the kitchen.	4	Fingers will peel off and be lazy ones. They may even grow breasts.
5	Eating of eggs/fatty mice/gizzards (boys, girls, women)	5	Impotence for boys/ labour pains for women and barrenness for girls.
6	Putting of salt to food when menstruating.	6	"Cut" the people eating the food.
7	Killing game when it is pregnant, mating, breeding period.	7	You will be haunted in the night as the animal will be coming in your sleep. You may run mad eventually.
8	Boys/Girls standing when talking to elders or in the presence of elders.	8	Legs will sink.
9	Having sex with a woman who had an abortion.	9	You will suffer from a disease called <i>kaliondeonde</i> (you become thinner and thinner and finally die. (HIV/AIDS related)
10	Boys/Girls entering their parents' bedrooms.	10	Blindness will strike them.
11	Girls looking at and not kneeling down when talking to men.	11	They will be thought to be immoral and lack good manners
12	Children not looking away when elders sit carelessly and claim ownership in an event of bad air realised by an elder.	12	They will either be blind or have a swollen eyelid. Ownership of bad air would earn a young one a reward for serving the face of an elderly person
13	Not saying no to marriage advances until several attempts are made.	13	A 'Yes' at first attempt would mean you were loose or stranded. Number of attempts would show the seriousness of the man.
14	Having sex with relatives e.g. sisters, nieces etc.	14	You remain stuck to each other forever till you die or in an event of pregnancy; you give birth to an albino.

Source: Field work

These taboos and their consequences seem to cover a wider range of scientific, social, moral and hygienic principles that are covered by the formal school curricula. For example taboos such as 1, 2, and 5 agree with scientific principles of preventing sexually transmitted diseases. The type of foods mentioned in taboo number five are rich in protein and would make the child grow very big and cause complication during delivery. This may suggest that a Chewa child goes to school rich with indigenous

knowledge that is never made use of by teachers.²² Such would be areas of commonalities that would form the basis of hybridizing the school curriculum and the AIKS. There are also a number of superstitions and beliefs with their meanings, which were used to reinforce the Chewa AIKS. (see chapter 6). These beliefs and superstitions still influence the way the Chewa people look at things. The following are some of these superstitions and beliefs and what they meant to the Chewa people:

Table 4: Superstitions and Beliefs among Chewa people

1	Mango trees and some wild fruits flowering extensively.	1.	Sign of hunger the coming year as there may be poor yield with crops due to poor rains
2	An open spider's nest on the ground/a lot of dew	2	No rains that day.
3	A closed spider's nest on the ground/or no dew and sounds of some birds.	3	An indication that it will rain that day
4	Chickens braving the rains and start scratching the ground in search of food while it is raining.	4	An indication that the rains will not stop but will take a long time to stop. (Usually chickens remain in sheds when it is raining).
5	A woman on her monthly period (menstruation) and a pregnant woman scratching her berry.	5	Not to cook any food for people because they will have pneumonia (<i>tulaso</i> or <i>mdulo</i>) and sign that she will soon deliver her baby.
6	Position of the moon when it first appears or covered in clouds.	6	Indicating amount of rains or the ushering of diseases that month.
7	The boy's penis not floating in water when swimming.	7	An indication of impotency and a report must be given to elders.
8	The first word a baby should utter must be 'tata' not 'mama.'	8	If the first word is mama, the child will be dumb.
9	Some special oil poured on the belly of a pregnant woman and trickles down in a particular direction.	9	The trickling down of oil in a particular direction will determine the sex of the child, whether boy or girl.
10	Palpitation of heart suddenly/a stand of hair at one end.	10	You will hear bad news/danger near by.
11	Girl/ woman not looking into the eyes of a man you are talking to but must look down.	11	Sign of showing respect and failure to do so suggest the girl or woman is immoral. The direct translation is " <i>wachimaso-maso</i> (She is 'eyes eyes' meaning morally unstable).
12	Never to sleep with head facing west (The dead are buried with heads facing the west).	12	The living should never sleep with their heads pointing to the West-(May have nightmares).
13	Giving birth to girls only.	13	Wife stronger than the husband and vice versa
14	Casual sex (just once).	14	No pregnancy. Pregnancy is based on continuous assessment. A child can have a number of fathers with some responsible for one part.

Source: Field work

²² See the results of the AIKS check list in chapter 6 of this thesis for details.

Looking at taboos and beliefs, and superstitions in tables 3 and 4, above, one would say the Chewa AIKS seems to cover a large spectrum of the formal schooling subjects like those listed down in Table 5

Table 5: Formal school subject coverage of the Chewa AIKS

1	Practical and occupational skills.
2	Life skills.
3	Character formation (patience, honest, obedience, endurance, respect).
4	Law (How to settle disputes).
5	Veterinary Sciences.
6	Social Psychology (Greetings, Questioning techniques).
7	Meteorology.
8	Ecology and Zoology.
9	Geography and History.
10	Herbal Medicine/Health enhancement therapies.
11	Mathematics.
12	Biology.
13	Chemistry.
14	Theology.
15	Linguistics.
16	Botany.

If a child goes to school with knowledge in the above subjects, it would be better if teachers used that knowledge as basis for teaching in schools. For example, the counting among the Chewa is in base five while the school mathematics is base ten. Children come to school with knowledge of counting in base five.

The Chewa AIKS had both formative and summative forms of assessments. Often the issue of assessment comes up each time reforms in the education systems arise. This is against a general and misleading notion that AIKS has no form of assessment (discussed later in this chapter and chapter six).

The use of proverbs and sayings of the wise is another effective way of inculcating knowledge into the young ones. The Chewa people have proverbs that are used when solving judicial cases, when teaching good manners and good behaviour and those for general use. The teaching point of these proverbs is narrated in the accompanying story. Most of these stories use animal characters. Kamanga (1996:1) holds that the Chewa proverbs can be put into categories. There are those used when solving judicial cases, for teaching, warning, reproof, character formation and for other miscellaneous purposes (see Kamanga, (1996) for the categories of the Chewa proverbs). Other than the approaches, methods and techniques mentioned above, the Chewa AIKS was, to a larger extent, entrenched in the so-called secret schools, the *Nyau* for boys of age and the *Chinamwali* for girls of age. It is not the intention of this research to go into details about *Nyau* and *Chinamwali* schools. The two require full research attributed to them. However, this research has made an attempt to look at how the two 'schools' have operated within the context of Chewa AIKS.

***Nyau* dance or *Gule wamkulu* (The great dance)**

Many writers and anthropologists have described *Nyau* in different ways. Some have described *Nyau* as a "secret school" or "secret society" (Rangeley, 1949; Phillipson, 1976; Schoffeleers, 1973; 1976; Nooter, 1993; Quarcoopome, 1993) while others have described it as a closed association of the male Chewa people (Smith, 1997). Still more, some writers have gone further as to describe *Nyau* as a religion of the Chewa people. This thought has been refuted by other writers like Mathews Schoffeleers, who claims that *Nyau* includes little which would be recognised as religious activity (Schoffeleers, 1976). The Chewa people call *Nyau*, *gule wamkulu* (*Nyau* the great dance) (Rita-Ferreira, 1968; Schoffeleers *et al.*, 1972; Mwale, 1973). All those who have been initiated in the *Nyau* dance or *gule wamkulu* are called *omwera*. From the term *omwera* comes the term *chomwera*, which is used as a password when a stranger strays into the *Nyau* camp (*Dambwe*) and needs to be given right of passage. Failure, on the part of the stranger, to respond correctly by repeating the password *chomwera*, when asked, "*Nicomwera?*" would entail problems. In the past, that would mean death for that strange.

In this thesis, I have argued that *Nyau* is not a secret school as claimed above. My argument is that the secrecy of *Nyau*, as an organization or a dance, is not by design

but consequential. Even before the colonial Rhodesian Government, banned *Nyau* in Zambia, the then Northern Rhodesia, it had already been in open conflict with early missionary groups. In both countries, Zambia and Malawi, the missions were amongst the strongest voices encouraging the colonial government to ban *Nyau* (Rangeley, 1949; 1950). It has been argued that missions and *Nyau* openly competed for hearts and minds of the youths, each trying to outdo the other by taking the boys at an increasingly younger age (Schoffeleers *et al.*, 1972; Smith, 1997). Smith (1997:203) summarizes this conflict in this way:

While missionaries sought to win the hearts of children at mission schools before *Nyau* could 'demonise' them, *Nyau* leaders tried to see that the boys became included within Chewa society before they were turned against traditional matters and 'polluted' by Christianity. The missions utterly failed to eradicate *Nyau*, but in some places they forced it away from their immediate environs.

Before the arrival of the missions, another group, the Ngoni, were also in direct conflict with *Nyau*. The Ngoni, led by Zwangendaba Jere, were a group who split off from the southern Ngoni in the nineteenth century. As the case was with many other groups, the Ngoni fled to escape the violent upheavals associated with the Shaka Zulu's wars of *Mfecane*. Linden (1971) holds that when the Ngoni people arrived in Eastern Zambia and Malawi, they started to raid and then settle in the 1840s and 1850s. The Ngoni sought to suppress *Nyau* because it stood for local interests and local autonomy, and in addition, it acted as a guardian of Chewa traditions and identity. *Nyau* stood in direct opposition to the practices by which the Ngoni sought to dominate the groups amongst which they settled. Although their raiding practices had a devastating economic impact on the Chewa, their attempts to impose Ngoni society and culture almost entirely failed. It is argued that the reverse occurred; the Chewa people were able to impose their cultural traits upon the Ngoni. This can be supported by the loss of their language. The Ngoni people of Zambia speak Nsenga and Chewa language other than the Ngoni language from South Africa (Read, 1956; Smith, 1997).

Schoffeleers (1976:64) says this about *Nyau* and the Ngoni invaders:

In the latter half of the nineteenth century in eastern Zambia, *Nyau* was so severely suppressed by a particular group known as Mpezeni's Ngoni that it was forced underground. *Nyau* also seems to have been forced underground in parts of Malawi.

This is supported by Rau (1979: 140), who again says, "We know that in Malawi, it (*Nyau*) was banned within all areas under direct Ngoni control." My argument would

be that it could be this action of sending *Nyau* underground that earned *Nyau* a name a 'secret school' or 'society.'

However, there is another reason given to the secrecy of *Nyau* from the womenfolk in general. Although entry into *Nyau* society is largely restricted to men, women play a pivotal and symbolically important role in *Nyau* 'school' (Yoshida, 1992). Women and young girls lead performances by singing, clapping and dancing. One would say women function as the focus- the audience- for the performance. It is the women who provide many of the materials needed for *Nyau* ceremonies: they cook any food such as for the initiates during their period of seclusion; they also (often unknowingly) collect grasses and maize husks. Probst (1997) argues that without women, there is no *Nyau*; that the audience and performance stand in relationship of mutual dependence and interaction. Despite this, women are excluded from the privileged information of *Nyau*. It is argued that the power derived from this secrecy provides men with a counterbalance to the dominating position held by women in the matrilineal Chewa society (Schoffeleers, 1976). The above information shows that *Nyau* plays many functions in the Chewa AIKS. *Nyau* has for centuries acted and played various roles within the Chewa AIKS such as a:

1. School
2. Dance for entertainment and lately as a form of entrepreneurship
3. Tool used by the Chewa to show some subtle resistance to foreign culture and invaders.
4. Teaching aid in solving social, moral, and spiritual problems facing the Chewa people, e.g. AIDS, Family planning, early marriages, respect for elders, meaning of death etc.

The *Nyau* as a "school"

Thompson (1994) holds that school in western society was called upon to perform socialising functions. When the school was introduced to Africa and Zambia in particular, this role was also commonly given to it. Among the Chewa people, this role of customary socialising was ably handled by *Nyau* and other socialising agents already. Like in any formal school, *Nyau*, as a school, follows a structured program of imparting knowledge to both the young and the old among the Chewa people. The organization structure of *Nyau* resembles that of formal school. The *Nyau* organisation structure is known even by those not initiated (*osamwera*). This means

that *Nyau* not a secret school. Below are some similarities between *Nyau* School and the missionary schools:

Table 6: Perceived similarities between the *Nyau* “school” and formal missionary schools

CHEWA <i>NYAU</i> ‘SCHOOLS’	MISSIONARY/WESTERN SCHOOLS
1. Organisation structure (Head, Deputy, Trainers, Trainees, Recruits).	1. Organisation structure beginning with the head to the pupil.
2. Code of conduct and pass word for identity when in camp (<i>Dambwe</i>).	2. School rules and uniform for identity.
3. Sought to win the hearts of boys before they are ‘polluted’ by foreign culture and turned against Chewa traditions.	3. Sought children’s hearts before ‘demonised’ by <i>Nyau</i> .
4. Specialisation in some dances that require some skills.	4. Specialisation in some skills.
5. Some <i>Nyau</i> dancers are called Joseph, Maria, and Simon.	5. Joseph, and Mary (Jesus’ parents) and Simon were prominent names among the missionaries.
6. Graduation ceremony for recruits locally known as <i>Gwere- gwere</i> .	6. Have open days and graduation ceremonies.
7. Very rigid curriculum centred on societal needs.	7. Very rigid curriculum imported from Western countries.
8. Had both summative and formative with more emphasis on the latter assessment.	8. Had both summative and formative assessment with more emphasis on the former.
9. Use of codenames other than everyday names of items while in camp and punishment for failures to decode.	9. Use of language of instruction in school and punishment for those using other languages while on school grounds.

Source: Adapted from Mtonga *et al.*, (2000) & Mtonga, (2006).

The duration a youth takes at the camp (*Dambwe*) varies, depending on the boy’s need assessment. The more lacking areas reported to the *Nyau* people the longer the boy would take in the camp (*Dambwe*). Joining *Nyau* is not obligatory. However, a boy who did not go through it had no social standing, so that traditionally, membership of *Nyau* School was practically universal.

The camp (*Dambwe*), like a school, was an isolated community, out of bounds for those not initiated. The *Nyau* School usually camped near some graveyard. Among the Chewa people, graveyards are sacred places that have no visitors. It has been argued that the missionaries may have misunderstood this choice of venue and

thought the *Nyau* School was demonic. As if to emphasise its role as a school, *Nyau*, had distinct categories of people engaged in specific function, who knew what they were doing and for what purpose. Special ties with the group of trainees (*anamwali*) bound these officials (*Anamkungwi*). The former too were aware of the significance of the ceremony and the succeeding training period. The entire process was highly organised and its objectives were clearly recognised (Mtonga, 2006). In most cases, training in practical skills was organized through a kind of apprenticeship system (Phillipson, 1976) (see chapter six for examples of apprenticeship).

***Nyau* dance as a form of entrepreneurship**

Nyau characters dance at various ceremonies and occasions. The main ceremonies where *Nyau* dances are at the funeral ritual (*maliro*), the commemorative celebrations for the deceased person (*m'meto*), the girls' initiation ceremony (*Chinamwali*) and during the *Kulamba* annual ceremony of the Chewa people. In recent times *Nyau* has performed even during public holidays like Christmas and at Independence days of their countries. There are times when *Nyau* dancers are hired for performances. Some *Nyau* dancers have even become professional dancers and make a living out of it (Smith, 1997). There are some notable names of the *Nyau* dancers such as *Makombe*, *Gomani nkhwende*, *Kholowa*, *Jelasi* and many others who have been professionals and are hired for performances. Such performances are known as *Nyau zamumpanda* (meaning indoors *Nyau* performances, usually in grass-thatched fences). This is some form of entrepreneurship. Attendance is by a fee. The more popular the particular hired *Nyau* dancer is, the more people attend the show and the more money raised. It was interesting to learn that one very famous *Nyau* dancer in Katete District was known as 'Form Five'. The name suggests that the *Nyau* dancer was a learned person who went as far as the last stage of his high school education yet he was also good at dancing *Nyau*. Although no known research has been conducted, it is common knowledge among the Chewa people that many of those who went through the traditional *Nyau* 'school' have not gone through the formal schooling education and vice versa. Such knowledge of a form five *Nyau* dancer may act as an eye opener to those who thought being initiated into *Nyau* meant no formal school. This also shows that formal education is not a barrier to active participation in one's cultural activities like *Nyau* dancing.

***Nyau* Masks as subtle tools for resistance to foreign domination**

As a way of resisting the imposition of the missionary education, the Chewa *Nyau* dancers found a subtle way of ridiculing and challenging the missionary education by naming some of their dancers after some prominent figures or names found in the missionary run schools. Realizing that names like Joseph and Mary (Jesus' parents) Simon (so many missionaries were known by that name) were very prominent in this type of education, the Chewa people gave names of such prominent figures to some of their *Nyau* dancers. To date, the Chewa people have *Nyau* dancers known as Yosefe (Joseph), *Maliya* (Mary), and Simoni (after numerous Catholic fathers and brothers known by that name, Simon)

Picture 8: *Nyau* mask called Simoni for Apostle Simon or the father Simoni in the Missions



Source: Mchombo, 2006: (on line).

Female masks called *Maliya* and male masks called *Simoni* and *Yosefe* were used in anti-Christian parodies of the Virgin Mary, the apostle Simon and Joseph, Mary's husband, respectively. Depending on context, it is conceivable that these masks could also have been used to praise certain Christian viewpoints where they might suit the purpose of *Nyau* or serve a local political agenda. Scholars also suggest that in pre-Christian masquerades the *Maliya*-type mask was used to teach Chewa sexual mores (Smith, 1997; Phillipson, 1976).

Picture 9: *Nyau* mask called Maliya for Virgin Mary



Source: *Nyau* mask: (on line).

Picture 10: *Nyau* dancer (*Maliya*) during the 2005 *Kulamba* ceremony of the Chewa people.



Source: Assistant to researcher during the 2005 *Kulamba* ceremony

Below are *Nyau* masks depicting something or some notable people in society. The message could either be praising those individuals or ridiculing them:

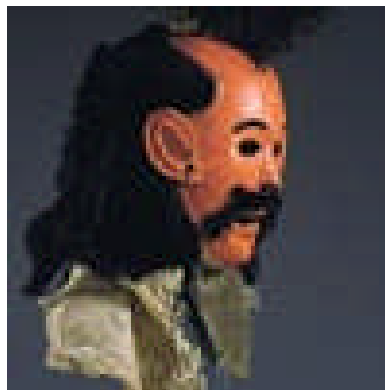
Picture 11: *Nyau* mask depicting the extraordinary power of this Muslim or Arab slave trader character implied by its head cover of lion skin



Source: *Nyau* mask: (on line).

Since Chewa chiefs were associated with lions there is also an assumption that such a mask may have been used to positively show the powers that the Chewa chiefs had like that of the Muslim Arab slave trader. There is also another *Nyau* dancer, *Makanja*, the tall *Nyau* character who dances on stilts. He makes a satire on the Arab slave traders who preferred to keep slaves rather than work for themselves (Mtonga *et al.*, 2000).

Picture 12: *Nyau* mask depicting a British Colonial Government commissioner



Source: *Nyau* mask: (on line).

Often it was those commissioners considered too cruel to work with who would be ridiculed. The good ones would be praised. Particular names of such commissioners would be used to refer to this particular *Nyau* wearing that mask. The songs that would accompany the dancing of this *Nyau* would show whether it is of praising or

ridiculing nature. Names of such commissioners would also feature in the song (Smith, 1997; Mchombo, 2006).

The Ngoni who invaded the Chewa people, as indicated above, are the ones who introduced cattle (*Ng'ombe*) to the Chewa people. *Nyau* cow mask is used to ridicule other than praise the Ngoni domination over the Chewa people during that period of conflict. Commenting on the *Nyau* cow mask, Smith (1997: 205) has this to say:

The Chewa neither kept nor placed significant emphasis upon cattle prior to the coming of the Ngoni. The Ngoni, like other Ng'uni groups, placed great cosmological importance on cattle. The cow is thus an obvious choice for a mask to lampoon the Ngoni. The time of the Ngoni conflict is therefore the likely time when this mask grew up or at least enjoyed the greatest popularity.

David Phillipson did research on *Nyau* rock paintings in Eastern Zambia (Phillipson, 1976). Commenting on a range of *Nyau* designs seen by David Phillipson on huts and house walls in this Chewa land, Smith (1997: 201) concludes that:

When *Nyau* was banned by the Northern Rhodesian colonial government, it became a symbolic focus for nationalistic resistance. The drawing of *Nyau* motifs in public places during the 1950s and early 1960s can thus be explained. As forbidden images, the designs acted as statements of resistance, taunting colonial law.

Another example of how *Nyau* can be used as a political tool for resistance and even be manipulated by politicians comes from Malawi. Smith (1997: 204) reports that:

In spite of his absolute control over the media (silencing almost every voice of dissent within Malawi and many outside as well), Dr Hastings Kamuzu Banda, the first president of Malawi, failed to control *Nyau*. In the 1980s and 1990s, *Nyau* became one of the only mouthpieces through which public dissatisfaction with the one-party system was voiced. A large number of *Nyau* political masks grew up at this time and appeared regularly at dances. Dr Banda, his official consort mama Kadzamira, and her uncle, the Minister of Finance, John Tembo, were especially lampooned. The songs that accompanied these masks were highly critical, mocking the bad behaviour of the leaders, just as older masks mock bad behaviour in other sectors of community. One mask made during preparation for the 1993 national referendum to decide whether Malawi should return to multiparty democracy lampooned Dr Banda himself. The sad look on the face of the mask is explained in the accompanying song wherein we learn that this is Dr Banda after he looked in the "no to multiparty" box and found it empty.

***Nyau* Dance as a Teaching/Learning Aid**

Nyau has also acted both as a teaching and learning aid in solving social, moral, and spiritual problems facing the Chewa people, e.g. AIDS, Family planning, early marriages, respect for elders, meaning of death etc. During the process of initiation at the *Dambwe*, the boys are punished for past misdemeanours, taught the secrets of *Nyau*, taught how to make the *Nyau* masks. They are also instructed how to behave as

adults. In addition to the social and sexual education, the boys would also learn many practical skills (Rangeley, 1949; 1950). Learning to make *Nyau* structures teaches the use of knots and ties as well as familiarity with various building materials.

The masks play yet another role in this area. The Chewa people teach and learn about the importance of spacing children in a family through a *Nyau* dance called *Katumbiza*. (The name refers to a family that does not space their child bearing). This *Nyau* dances with many puppet babies around him. The accompanying song explains the problems that come with lack of uncontrolled child bearing. There is teaching taking place even during the period that would be considered for entertainment only. In the Chewa AIKS, age is a symbol of wisdom. It is believed among the Chewa people that the older one is the wiser he or she becomes and consequently the more respect one deserves in society. This belief is well captured in *Nyau* through the *Nyau* mask *nkhalamba* (old man).

Picture 13: Nkhalamba (Old man) mask



Source: *Nyau* mask: (on line).

Writing about the age as a determining factor for respect giving among the Chewa people, as depicted in the mask above, Smith, 1997:204) holds that:

The mask, named *Nkhalamba* ("Old man") was danced at *Nyau* initiation ceremonies to epitomize wisdom and authority. Elders are also the carriers of history and tradition, and their advanced age places them closer to death and the ancestral realm. The male elder represent a *Nyau* ideal that contrasts markedly with the masks portraying outsiders.

My argument is that there are a number of old people who may not be considered wise at all. The fact that some old persons can be referred to the *Nyau* counsellors (*Anamkungwi*) for disciplining purposes as reported by one Chewa chief (see chapter

six) disqualifies the notion that every old person is wise. Limiting sources of knowledge on the basis of ones age endorses a notion that knowledge is always there stored for you and is never constructed, yet the ability by the *Nyau* to adapt to various situations may suggest construction of new forms of knowledge.

There is also an element of teaching the young ones about some animals not known to their generation. Since many young ones today have no chance to see the real animals, the *Nyau* animal masks give them a chance to see part of these animals (e.g. horns). One problem ravaging the whole education system in Sub- Saharan Africa is the effect of HIV/AIDS on both pupils and teachers. The practice in Zambia is that employers buy coffins for their employees when they die. In two Education Districts visited during this research, I discovered that the District Education officials buy and keep planks for coffin making in advance at their offices. This is with full knowledge that every month, a teacher or teachers are bound to die of AIDS related illnesses. *Nyau* has taken it upon itself to get involved in community sensitization on the dangers of contracting HIV/AIDS through a recently devised mask called *edzi* (AIDS). Warning messages are given in the accompanying songs as well (Probst, 1997). Even before the coming of HIV/AIDS, the Chewa still had a *Nyau* mask depicting illnesses. This would warn people of various illnesses and accompanying songs would give more warnings and possibly how to avoid those diseases. This mask is known as *Tsempho* (Disease).

Picture 14: *Nyau* mask called Tsempho (Disease)



Source: *Nyau* mask: (on line).

This *Nyau* dancer, like now with this HIV/AIDS pandemic, would dance to instil fear in the initiates and the general public about the dangers of this disease. The examples above show that the Chewa AIKS, through *Nyau* is able to adapt and change all the time in response to the new needs and concerns of society. One would argue therefore that it is not true to consider AIKS as rigid and not able to change and adapt. This ability to change and adapt to challenging situations would make it possible then to hybridize positive aspects of the Chewa AIKS and *Nyau* in particular with formal school. The Chewa AIKS, through *Nyau* may influence positive change in formal school while at the same time maintain its role as a guardian of Chewa traditions and identity (Smith, 1997; Phillipson, 1976).

When you visit the Kulamba ceremony, you see various *Nyau* masks. Some depict young and old European (*Mzungu*) faces. It is argued that such masks are in appreciation of the good qualities and manners of the Europeans. There is an element of integrating other forms of knowledge and culture into the *Nyau* dance. This will be looked at in chapter six to see what role this could play in formal school education.

Picture 15: *Nyau* masks of European faces



Source: Assistant researcher during the 2005 Kulamba ceremony of the Chewa people.

Initiation Ceremony (Chinamwali) for girls of age

The Chewa people like most other societies in Africa and Zambia, believe that growing up is not a simple process of maturation, but involves a thorough preparation for the role to be played in the adult life. For the girls, the training for the future started almost immediately after birth, and reached a dramatic climax at the time of

puberty rites. Even at an early stage of development older people including other children taught a baby how to identify objects. A little later instruction in proper behaviour began. For example, a baby was told to receive a gift with both hands and share it with others. A small hoe would be made specifically for a child for the training in farming. The small girls (*mabuthu*) have own playing activities called *madimbiko*. The girls would be given salt, meat or vegetables to cook food and bring it to their mothers to taste. If they cooked well, their mothers would praise them but if not, the girls would be teased with, 'is this how you will be cooking for your husbands'? This could be an example of how gender roles are constructed and stereotyped (see Gender section in this chapter).

Girls' education came to a climax with puberty rites. At this stage they are no longer called small girls (*mabuthu*) but are called *anamwali* (girls who have reached puberty stage). The latter part of the initiation ceremony (*Chinamwali*) was held at 'chilengo' tree (Tree for counselling) towards sunrise. Here we see education for the girls before their puberty (*buthu*) and another suitable for those at puberty stage (*anamwali*). This point is important because one criticism of the Chewa AIKS and initiation ceremonies for girls, in particular, is that they encourage early marriages and child pregnancies. Some sources have argued that such claims could be true. The happenings at the 'chilengo' tree look to underpin the focus these ceremonies on marriage and child bearing. Lancaster (1934: on line) gives a detailed account to what happens at the 'chilengo tree', the climax of the initiation ceremony:

On this tree [chilengo], a large mud image of a leopard is placed. The image is daubed over with red, black and white spots to make it look a very fierce animal. During the dance, the *chinamwali* girl dances towards the *chilengo* tree. Suddenly, the girl's husband appears on the scene, dancing towards the chilengo holding either a bow and arrow or an axe. He is expected to either shoot the 'chilengo' or strike it with his axe. This procedure is to show the onlookers what a fierce man the husband is and to warn the onlookers what will be the fate of the man who commits adultery with his wife. If the girl has no husband or fiancé but has a cousin, then her cousin has the right to perform the ceremony and it is he who would marry her if he wished. Should a striker at the 'chilengo' figure miss his aim, this is considered a very unfortunate as the husband is considered to be impotent.

The quotation above shows the emphasis on marriage and child bearing in these ceremonies. Although much of such happening are said to have changed, there is a possibility that some of it could still be there as suggested by Thrift (1996). After all the Chewa community considers it a pride when a girl goes through the whole ceremony, whose climax is 'chilengo' (see the critique to IKS in this chapter). The

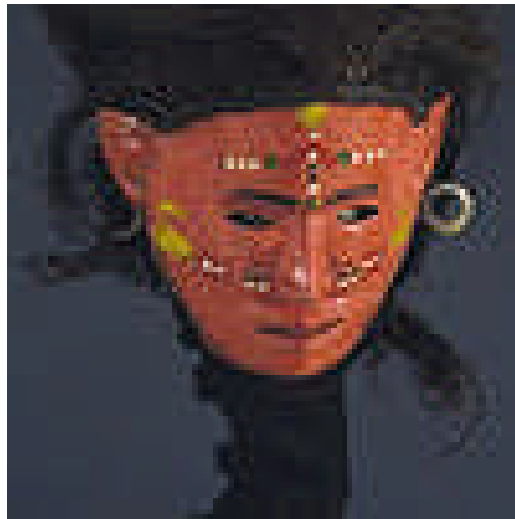
summative-like assessments employed to determine the ability of having reproductive powers in a newly wedded couple after the *chilengo* could show that there could be some truths in claims that initiation ceremonies promote early marriages. Commenting on such assessing techniques one-woman counsellor (*Mlangizi*) gave what we could call a triangulated form of summative assessment:

The wife is given a stick on the first night she meets her husband. This must be broken into pieces equal to the number of times they have had sexual intercourse. Just one piece would imply the man is weak, though too many would also suggest the man has weak sperms. This would be checked by a piece of cloth used to clean the man's male organ after sex. The piece must remain glued together to show that the man is strong. The woman would also be smeared with maize flour on the chest. There should be no trace of it after the act. Sometimes a piece of firewood would be supplied to the couple and it must not finish before the wife is pregnant (Mutashe, 30, December, 05, Group 1).

The quotation above gives a number of contentious forms of assessment that could provide debate in a science class teaching reproductive systems. Again the focus in the quotation is on marriage and reproduction. In the Chewa AIKS, the climax of one's education is for one to have a family and have children. The emphasis on marriage in the Chewa AIKS needs that context. There is a belief that an African man fears impotence more than death. This kind of information is not documented anywhere and there is danger of losing it. Such findings show that programs in schools on the prevention of early marriages, child pregnancy and HIV/AIDS need such back ground information.

Nyau would still feature during the initiation ceremony of girls to consolidate the values that have been passed to the girls and show the pride the Chewa people have for girls and women with good manners and behaviour. Below is the *Nyau* mask showing beauty of a woman which is not just in appearance but in manners that are passed to them from the elders. Although *Nyau* 'school' is more for men, its activities and influence stretches to women's activities and programs. After all its women who sing and ululate during the *Nyau* dances.

Picture 16: The *Nyau* mask, named *Dona* danced during both male and female initiations



Source: *Nyau* mask: (on line).

Among the Chewa people, *Dona* is the name that was used to refer to a white woman, possibly the wife of the master. The term is now widely used to refer to one's wife. The fact that such a *Nyau* mask is used during the initiation ceremony of girls could be an indication that the mask is used positively to emphasis the beauty of good behaviour of a Chewa woman other than just that of one's appearance. For example, the mask of *Mbalangwe* seen below is associated with women. The marks on the mask depict respect of a woman who has undergone initiation. Chewa women can also become chiefs. It is possible that the mask depicts a female chief. The feather headdress and height of the mask indicate its sacred importance.

Picture 17: *Nyau* mask called *Mbalangwe*



Source: *Nyau* mask: (on line).

Mtonga *et al.*, (2000) holds that the *Nyau* mask *Mbalangwe*, when with a man's facial appearance, would convey yet another meaning. He dates the appearance of the *Mbalangwe* mask with the coming of the European adventurers. He says that *Mbalangwe* was created to ridicule a white man flirting with the African women in the village. Again, the accompanying songs to the dance would tell the whole story.

The Chewa AIKS and Gender Issues

In Zambia the image of the girl child has for a long time been that of a passive, submissive person who remains quietly in the background, the first to serve, the last to speak (Kelly, 1994). This image is reflected both in the community where she lives as well as her school environment. In school, this image is strongly reflected in the text books, the treatment she would get from teachers and boys in class (Sinyangwe *et al.*, 1995). In the community, she is faced with a situation where women are treated as second class citizens, whose place is in the kitchen and whose jobs among many minor ones are to cry in funerals- a job they seem to accomplish very well as they sometimes cry even before they find out who has died. Such situations have created stereotyped words and proverbs discussed in this section.

The 1996 policy document on education and gender (Kelly, 1994) has brought some interventions that seem to change this gloomy picture on girls' education and women development in general. The gender policy document states that:

The ministry of education is committed to achieving gender balance in educational institutions and within the educational systems by eliminating factors that hinder the access, progression, and accomplishment of girls in schools and colleges (MoE, 1996:65).

As a way of implementing the policy, an advocacy stance was adopted by the Ministry of Education to promote deserving women to decision- making positions. A Program for the Advancement of Girls' Education (PAGE) was launched and it brought many changes such as allowing pregnant girls to continue with their school (Kelly, 1994; 1999). Despite these interventions girls and women are still disadvantaged in many areas. The male dominance is still very prevalent in many programs and activities in the Chewa AIKS. For example, the superiority of boys and men would always be emphasised through the use of highly gender biased expressions and proverbs such as.

Aja amene mkodzwo wao sulumpha mzera asamakamba pagulu (Those whose urine cannot jump a ridge should not talk in public).

Kuphunzitsa mwana wa chikazi chilli monga uthilila mbeu mdimba la wene (Educating a girl is like watering a plant in the neighbour's garden as she will join the husband once married and parents do not benefit much)

Mwana wa mkazi ni thumba. (A girl child is like a bag; meaning is producing and keeping children).

Anthu achikazi ali monga matako, Siyakhala kusogolo (females will always be behind and never in front, like buttocks).

Mwana wa mwamumna asamalila monga mkazi (A boy child must be strong and should not cry like a woman).

Mwana wa mkazi mapikiti siyapitilila mutu (A woman is like shoulders. They never go over the head [the man]).

Despite these genders biased proverbs, the Chewa Royal Establishment includes women with some authority in its organisational structures (Banda, 2002). The queen mother to the paramount chief Kalonga Gawa Undi, Nyangu, has some authority at the palace. Each village has a sister or niece to the village head (*Mfumakazi*) who has some authority and can pass some decisions when the chief is not around. The female folk can be initiated into *Nyau* dance if they so wish. However, we can still argue that more has to be done to involve these women in decision making. There are still indications there is still male dominance in almost the structures. For example, chiefs' counsellors are all male even when the chief is female.

Despite such gender biased proverbs against women's development, proverbs are a very important source of wisdom among the Chewa people, and this is an area that needs more research to find out if there are new proverbs that have come up with time and technology and what new epistemologies they convey (See chapter one for new 'English' names coming with new technology).

Conclusion

Although past tense is used to refer to the Chewa AIKS, just as the case in many authors' writings on IKS, the system described persists even now, both in rural and urban areas though more in the former (Datta, 1984). The picture given by this discussion is that the Chewa AIKS has survived the test of time in many ways. The *Nyau* dance activities have revealed the ability of the Chewa AIKS to adapt to various situations. This may suggest that the Chewa AIKS has always remained relevant to

the needs and aspirations of the Chewa people. Through its *Nyau* masks, and the songs, the Chewa AIKS are able to criticize and commend, dislike and admire; discard and adapt various traits in people regardless of their origin. The Chewa AIKS gives us a rich source of information. Some of it could form the common ground between the formal school and the Chewa AIKS , forming an interception set. (See Figure 14) Its ability, as seen through various masks with various roles and functions, shows that the Chewa AIKS is able to respond to the needs and concerns of its people. The inclusion of the valued practical skills from AIKS into the formal school curriculum would act as 'attractors' to both the children and parents (see chapter six). The chapter has cited examples showing that the Chewa AIKS has changed to accept gender changes in a number of ways e.g. there are more women chiefs and village heads than before, the exclusion period for school girls during the initiation is said to have been reduced. Sometimes such ceremonies are now conducted during holidays to avoid disturbing the school calendar and chiefs are reported to be intervening in early marriages for girls (see chapter six). There are also a number of chiefs with university qualifications.

The next chapter looks into the methodology and methods that have been employed to research into the Chewa AIKS described in this chapter.

CHAPTER FIVE

RESEARCH METHODOLOGY AND METHODS

Introduction

This chapter describes the overall conduct of this study. Addressed here are several aspects namely, conceptual frameworks, epistemological issues and matters relating to positivism and interpretivism as the two paradigms that underpin quantitative and qualitative methodologies respectively. The main and subsidiary questions guiding this research are restated at the beginning of this chapter to demonstrate that the methodology and methods used for this investigation are in line with what is being investigated.

The methodology employed is qualitative. The rationale for using qualitative rather than quantitative research approach is described later. Although this research emphasizes the use of qualitative approach, simple statistics and simple percentage techniques are used also as clarified by (Patton, 1990). Furthermore, a general overview of the research design, methods and techniques, sampling methods for the selection of research participants, triangulation techniques and data collection, are all presented. The triangulation techniques are used to allow these various methods to complement one another and provide additional insight to the study. Later, details of data display, analysis and interpretation are presented. The chapter concludes with a discussion on reliability, validity and ethical issues.

Main research question

Can the hybridization of Chewa AIKS and the formal school curriculum enhance the achievement of Education for All (EFA) among the Chewa people in Zambia?

Subsidiary questions

- Can Zambia achieve EFA goals by 2015?
- What challenges has Zambia faced with the implementation of EFA goals?
- Do the Chewa people and their AIKS support EFA?
- What are some of the indigenous forms of learning that emerge from the Chewa AIKS?

- How organised and inclusive is the Chewa AIKS to enhance the achievement of the EFA goals?
- How is knowledge accumulated, stored, transmitted and assessed in the Chewa AIKS? Is that knowledge static or responsive to change?
- How can the Chewa AIKS be hybridized with the formal school curriculum?
- In what other ways can the Chewa AIKS be used?
- Are there perceived barriers between school and community that the hybridization of the Chewa AIKS and formal school could try to remedy to enhance the achievement of EFA goals?
- What role do various stakeholders (Ministry of Education, Universities, National Curriculum Development Centre (CDC), Community schools management, Technical and Vocational Education Training Authority (TEVATA), Examination Council of Zambia (ECZ), UNESCO, Lusaka office, and NGOs on education projects play in the mainstreaming of AIKS into the school curricula?
- What roles can the Chewa traditional chiefs, local leaders, elders, and others perceived to be custodians of the Chewa AIKS such as traditional healers and traditional birth attendants (TBA), play in the designing and implementation of school curricula in their areas?
- Do children bring to classroom any aspect of the Chewa AIKS?
- If so, do teachers make good use it during their lesson preparation and presentation in various subjects?
- What could be the possible frameworks of the hybridization of the Chewa AIKS and the formal school curriculum?
- What factors can affect the hybridization of the Chewa AIKS and the formal school curriculum?

Indigenous knowledge research and Anthropological practice

Anthropology argues that for one to understand the culture of a group of people, one must engage in relatively longer period of observation (Silverman, 2005). The idea is one should immerse oneself in a given culture over a period of time. It has been argued that the early anthropologists were administrators and civil servants employed by their colonial governments, making them adopt a colonial methodology as observed by Jarvie (1964:3):

The anthropologist must relinquish his/her comfortable position in the long chair on the veranda of the missionary compound. He/She must go out into the villages, and see the natives at work in the gardens, on the beach, in the jungle... and observe them in fishing, trading and ceremonial overseas expeditions. Information must come to him/her full – flavoured from his/her observations of the native life.

Contemporary anthropologists on the other hand try to be practical and analytical as they attempt to understand other peoples' cultures in the context of an increasingly globalised world (Craig, 1976; Burford *et al.*, 2003; Silverman, 2005). Examples of contemporary anthropology are cognitive and structural anthropology. The former seeks to understand how people perceive the world by examining how they communicate and the latter focuses on peoples' behaviours and treat them as main building blocks of society. It views behaviour as an expression of a society which works as a hidden hand (Silverman, 2005) constructing and forming human actions. I take myself in this research as a contemporary anthropologist. For four months, I was conducting an anthropological study on my own people, the Chewa people, talking to them in our own language and participating and interacting with them in our everyday activities. In my work, I borrowed from both cognitive and structural anthropology. Since I did not go out there looking for a set of rules called the Chewa AIKS but treated the Chewa AIKS as people's way of living with their environment, I would say I was more of a structural anthropologists. I researched on people's actions, whose meanings emerged themselves from that in-depth exposure. I was not looking for 'facts' but aimed at grasping reality in its daily accomplishment (Brislin, 1967; Crotty, 2003).

The conceptual framework

The conceptual framework of this study is based on the assumption that there are multiple linkages among AIKS, formal, informal and non-formal education systems. These linkages can form the basis for the mainstreaming of AIKS into the formal and non-formal curricula. The framework identifies from the indigenous /local institutions the following: the traditional chiefs, village heads and elders, midwifery, medicine men/women and others known and respected by the communities as custodians of vast knowledge. The other stakeholders identified are teachers, Ministry of Education officials, non governmental organisations, curriculum specialists and developers, policy makers, Technical and vocational education training officials, and the donor communities involved with educational and community development programs and projects. The assumptions are that these parents should work together in an effort to bridge the gap between school and the community. This way, the school context can go a long way towards opening formal learning to a wider range of cultural experiences (Barnhardt *et al.*, 2005). The product of such efforts would likely produce

a hybridized school curriculum and better linkages between formal education and local traditions (Brembeck, 1973). This framework also takes into account the observation made by Sillitoe *et al.* (2005:292).

Development program managers and project leaders who wish to incorporate an indigenous element into their work and are interested in a more long-term thorough Indigenous Knowledge (IK) other than seeking a quick and limited IK component need to seek a continuous spectrum of approaches and tools. They take cost, time and scope of objectives as the principal design issues. The guidelines must make reference to project cycle management in the context of natural resources, indigenous knowledge research, and present options for reducing conflict and more effectively including the views of all primary stakeholders.

This framework also takes into consideration that this, as an indigenous knowledge research, needs to take a holistic approach by involving all the stakeholders in solving the perceived problems, which in this case is the provision of education to all. This is what Sillitoe *et al.*, (2005:12) point out:

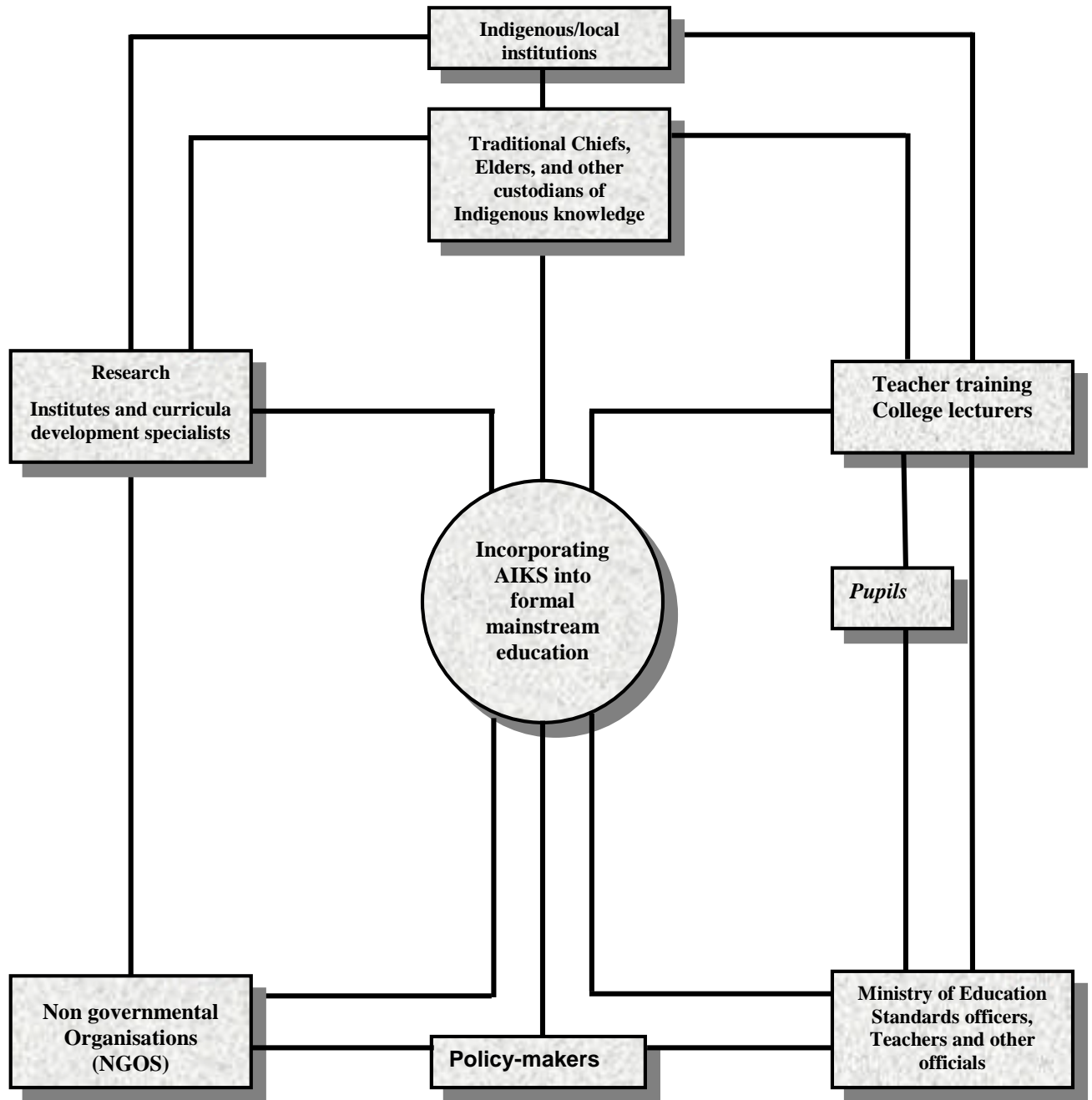
One of the central methodological issues of the indigenous knowledge and participation debate is facilitating meaningful communication between scientists and local people to establish what research may have to offer. A premise of indigenous knowledge research is that we need to adopt a more modest stance and allow others to teach us about their understanding of their natural resources, and generate solutions to jointly perceived problems, not attempt to impose inappropriate outside ideas because no matter how elegant a solution, scientific or otherwise, if people reject it on cultural grounds, it will meet with local disinterest or opposition.

The conceptual framework followed in this research, therefore, aims to serve as a two-way link between the perceived custodians of Chewa AIKS, on one hand and those perceived to be the developers and implementers of education policies and the providers of formal schooling, on the other hand. This approach is supported by Sillitoe *et al.*, (2005:4) when they hold that:

Indigenous knowledge research should aim at making connections between local people's understandings and practices and those of scientific (school) researchers and development practitioners. Indigenous research should aim to contribute, in the long term, to gainful development and positive change, by promoting culturally appropriate and environmentally sustainable adaptations acceptable to people as they increasingly and commercially exploit their natural resource.

My argument is that more often than not, connections between the two forms of knowledge are ignored and more focus is put on differences and weaknesses. Such research approaches have resulted into some researchers taking sides and aiming at proving a given form of knowledge either bad or good.

Figure 21: Linkages in Mainstreaming of AIKS into the School Curriculum



Adapted from Kolawole (2005:20)

The Ontological Paradigm and the Epistemological Underpinning

The two predominant approaches that dominate the empirical study in social sciences, i.e. positivism and interpretivism, have historically oriented social research since its inception and have categorized it into either empiricist or humanist research (Hughes,

1990; Denscombe, 2002). Various other labels have been used to refer to this distinction. Commonly used ones are positivism and interpretivism (Bryman 2004).

Denscombe (2002:14) defines positivism as:

An approach to social research that seeks to apply the natural science model of research to investigation of social phenomena and explanations of the social world.

On the other hand, interpretivism is said to be an umbrella term for a range of approaches that reject some of the views held by the positivism (Denscombe, 2002). This is a research approach that aims at understanding the complex “life world” from the research participants’ own perspectives. This life world is a complex construction of meanings, values, and lived experience. It is often called “hypothesis generating” because theories “emerge” after data collection. These hypotheses that emerge from analysis inform further data collection. Theories can be formed early in the research and successfully be elaborated as the process continues. This cycle is repeated many times before the research is finally produced (Cohen *et al.*, 2000). Denscombe (2002:14-15) further identifies basic premises that the positivist and interpretivist positions generally adhere to, as shown in the table below:

Figure 22: Positivism and Interpretivism Paradigms

POSITIVISM	INTERPRETIVISM
<ul style="list-style-type: none"> • The social world is best explained in terms of cause and effect (Ontology) • There is a presumption that there is an objective reality “out there” waiting to be discovered (Ontology). • There exists a “unity of methods” to reveal and analyse the reality of social life i.e. Scientific method is applicable to all subjects, areas, topics, across all disciplines etc. • Theories and explanations have no credibility unless based on observations. • Social research needs to use appropriate tools and techniques to discover and examine the patterns and regularities in the social world. These tools and techniques must not interfere with or influence the observed reality. • In the process of discovering facts, both the human observer and the techniques for measurement are neutral or can be controlled. The researcher is expected to retain a detached, impartial position in relation to what is being observed. 	<ul style="list-style-type: none"> • Social reality is something that is constructed and interpreted by people- rather than something that exists objectively “out there” waiting to be observed. (Ontology) • Humans react to the knowledge that they are being studied. (Epistemology) • Humans react to the knowledge produced by being studied. E.g., if research leads to certain predictions, those with influence responsibility, vested interest might react to the knowledge and actively take steps to ensure that the predictions do not become a reality. • It is not possible to gain objective knowledge about a social phenomenon because values and expectations of those undertaking research will always influence the outcome. (Epistemology) • Researchers cannot claim to be objective because explanations are inevitably influenced by researchers’ expectations and conceptions of the social world. • There is always a scope of alternative and competing explanations, each of which can claim validity. I.e. Interpretivists’ accounts are always open to the possibility that another researcher might see things differently and produce a different account.

Source: Adapted from Denscombe (2002:14-22).

These two approaches have generated the distinctions between quantitative and qualitative research vision (Denscombe, 2002). Quantitative research rests upon the positivist assumptions while qualitative research rests upon those assumptions of interpretivism (Herbert, 1990). These are two organic and strongly opposed visions of social reality. In other words they are paradigms which are the perspectives that inspire and direct a given science. Lincoln *et al.*, (1985: 105) define paradigm as 'the basic beliefs or worldview that guides the investigator, not only in choices of method but in ontological and epistemological fundamental ways'. Paradigms are vital in guiding the conduct of research. Hughes emphasises that:

Every research tool or procedure is inextricably embedded in commitments to a particular version of the world and ways of knowing that world made by researchers using them. To use a questionnaire, an attitude scale of behaviour takes the role of a participant observer; selects a random sample to be involved in conceptions of the world which allow these instruments be used for the purposes conceived. No technique or method of investigation is self-validating. Its effectiveness and its very status as a research instrument are dependent, ultimately on philosophical justification (Hughes 1990: 13).

I agree with the above quotation and hence the use of a number of techniques and methods in this research.

Rationale for Qualitative and Quantitative research methodologies

This research follows the qualitative strategy. However, I feel qualitative research is better understood when contrasted with quantitative research in the way that positivism has been contrasted with interpretivism above. This does not in any way suggest that qualitative research is not legitimate in its own right, as it does not need to be compared to merit respectability (Creswell, 1998). The two, however, overlap in many cases (Patton 1990). To start with, quantitative research imposes restrictions on the scope of the investigation (Hebert, 1990). This is because of its requirements for rigidly adhering to certain procedures such as sampling and analytical techniques. Quantitative research is interested in details that can be measured to produce results, which could be generalised. It often makes statistical analysis. The assumption of quantitative research, as pointed out by Travers (1969:87), is that 'without resort to measurement, knowledge usually lacks precision and is often hopelessly vague.' Generally, quantitative research is considered to be more precise and hence more reliable although the information it gives requires more careful evaluation for meaning (NECO, 1997). The information is more generalised.

Qualitative research on the other hand tends to be sceptical about the use of 'scientific' methods as statistical analysis for the study of human beings, arguing that data about individuals' feelings, attitudes or judgement are too complex to be quantified (NECO, 1997; Verma *et al.*, 1999). Qualitative research therefore is concerned with what goes on in social settings. Its goal is "to understand the social phenomenon" (McMillan *et al.*, 1993:373). We would argue that the information is more localised and relative.

According to Kirk *et al.*, (1986), qualitative study is a particular tradition in social science that depends on watching people in their own territory. In contrast with quantitative study, a qualitative observation identifies the presence or absence of something, while a quantitative observation involves measuring the degree to which some feature is present.

Qualitative researchers express a commitment to viewing events and the social world through the eyes of the people that they study. The social world must be interpreted from the perspective of the people being studied, rather than as though those subjects were incapable of their own reflections on the social world (Bryman, 2001:277).

It is no wonder then that qualitative research is identified with sociology and anthropology and seen as naturalistic and participatory (Freebody, 2003; Bryman, 2001). The nature of my study seems to suit this approach as it offers me "a natural setting where, as a researcher, I am an instrument of data collection, able to gather words or pictures, analyze them inductively, focus on meaning of participants, and describe a process that is expressive and persuasive in language" (Creswell, 1998:14). Gubrium *et al.*, (1997) In: Bryman (2001:265) suggest four traditions of qualitative study which also seem to favour an indigenous knowledge research like this one:

1. Ethno methodology (seeks to understand how social order is created through talk and interaction and has a naturalistic orientation)
2. Postmodernism (It is sensitive to the different ways social realities can be constructed)
3. Naturalism (seeks to understand social realities in its own terms and provides rich descriptions of people and interaction in natural settings.
4. Emotionalism (exhibit a concern with subjectivity and gaining access to "inside" experience: concern with the inner reality of humans)

Bryman (2001:267) suggests six main steps is qualitative research, which this research has tried to implement:

1. General research question(s) (This forms the starting point in many qualitative studies.

2. Selecting relevant site(s) and subjects (Place where the research is to be conducted and the identification of research participants).
3. Collection of relevant data (methodology and methods to be employed in data collection e.g. ethnographic, interviews are stipulated and justified).
4. Interpretation of data (Looks at key findings emerging from the data other than from the researchers’ expectations).
5. Conceptual and theoretical work (tying together of some new concepts that may emerge from the research. It is this step, coupled with the interpretation of data that forms the study findings).
6. Writing up findings/ conclusions (main point to note here is that an audience has to be convinced about the credibility and significance of the interpretations offered. However, findings must emerge from the research itself other than from the researchers themselves or from those funding the research.).

Cohen *et al.*, (2000) compare qualitative and quantitative methodologies by looking at words that are associated with the two (see Figure 23 below). This analysis did not only help me to have a macro-view of the phenomenon that is being investigated but also provided a simplified road map to follow in my research:

Figure 23: Comparison of Qualitative and Quantitative Methodologies

Quantitative Approach	Qualitative Approach
<ul style="list-style-type: none"> • Numbers • Predetermined, given • Measuring • Short-term • Intermittent • Comparing • Correlating • Frequencies • Formalities • Looking at • Regularities • Description • Objective facts • Describing • Looking in from • The outside • Structured • Statistical 	<ul style="list-style-type: none"> • Words • Open-ended, responsive • Capturing uniqueness • Long-term • Continuous • Capturing particularity • Valuing quality • Individuality • Informality • Looking for • Uniqueness • Explanation • Subjective facts • Interpreting • Looking from • The inside • Unstructured • Ethnographic, illuminative

Source: Cohen *et al.*, (2000:272).

The information given in the Figure 23 above seems to support an argument in favour of qualitative research. For example, on which comes first, Travers (1969)argues that quantitative research is always preceded by qualitative research in the sense that in the early stages of any research, knowledge, which may not be precise, is often acquired through qualitative methods. You ‘look for it’ first before you can ‘look at it’;’ capture particularities’ before you can ‘compare’ them etc. It is much later that

scientific methods can come in to measure and develop more precise knowledge (Travers, 1969). In addition, qualitative research is appropriate to indigenous knowledge research like this study in that its emphasis, as shown by the selection of words in Figure 23 above, is on listening and learning from people, where the notion of knowledge transfer remains, not as a top-down imposition from the researchers, but a search for jointly negotiated advances among all the stakeholders (Sillitoe *et al.*, 2005) (see chapter six). In this research, for example, I was aware of my position as an 'insider' who observes things as they unfold and not an outsider who is out there collecting facts. The focus group discussion with traditional leaders brought to my attention what Travers (1969) said that in qualitative research you need to capture uniqueness. There were some participants who said very little but the symbolisms and use of proverbs said volumes (see chapter six for use of proverbs and illustrations).

A parallel critique has been built up of qualitative research. Such a critique is important to my research. It gave me an insight of what to look for and what pitfalls to avoid as I went about with my research. Some of the more common ones that can also be drawn from the tables above are that qualitative research is:

1. Too subjective (that qualitative research is too impressionistic and that its findings rely too much on the researcher's often unsystematic views about what is significant and important, and also upon the close personal relationships that the researcher frequently strikes up with the people studied).
2. Difficult to replicate (There are hardly any standard procedures to be followed to conduct a true replication as it is unstructured and often reliant upon the qualitative researcher's ingenuity).
3. Problems of generalization (It is often suggested that the scope of the findings of qualitative investigations is restricted. When participant observation is used or when unstructured interviews are conducted with a small number of individuals in a certain organisation or locality, they argue that it is impossible to know how the findings can be generalized to other settings).
4. Lack of transparency (It is sometimes tricky to establish from qualitative research what the researcher actually did and how he or she arrived at the study conclusions. Sometimes qualitative research reports are unclear about such matters as how people were chosen for observation or interviews) (Weiss, 1997; Bryman, 2001).

For example, some of the respondents were discussing the Chewa AIKS not from what they experienced but what they have been told was happening, making their explanations, narrations and interpretations highly subjective and difficult to generalize the findings (see chapter six). For example, one of the participants in a

focus group discussion involving the chief's counsellors was interjected by another participant and he stood up and walked away. When he came back, his contribution was not as before. It was very hard to decide what caused the participant to behave that way. This reveals another weakness of qualitative methodology with the validity of measurement. For example, I may have assumed that the participant was offended with that interjection and walked away when in fact he may have just gone out to answer the call of nature or it could be that the two often interject each other.

Despite all the stated disadvantages, qualitative research still has a number of advantages for my study, especially those cited by Weiss (1998:253):

- Greater awareness of the perspective of program participants, and often a greater responsiveness to their interests.
- Capability for understanding dynamic developments in the program as it evolves
- Awareness of time, history and changes.
- Special sensitivity to the influence of context.
- Ability to enter the program scene without preconceptions or prepared instruments and to learn what is happening.
- Alertness to unanticipated and unplanned events. The things you discover may not be the things you set out to do.
- General flexibility of perspective

The awareness of time, history and change was very useful to this research which looks at AIKS, generally perceived as knowledge from the past. The world view shared by many respondents in this research and corroborating with the literature review is that people should go back to their roots in order to move forward (see chapter six). This is supported else by Kanu (2007a) who quotes the concept of *sankofa* (returning to the past to move forward) derived from the Akan people of Ghana.

It is on the basis of such advantages of qualitative approach that this research has followed this approach. Particular interest to this research is what McMillan *et al.*, (1993:372) say about most qualitative research:

It tends to describe and analyze people's individual and collective actions, beliefs, thoughts, and perceptions. It is concerned with understanding the social phenomenon from the participants' perspective.

The qualitative research methodology puts this research in a better position to gain meaning and understanding of how the Chewa people accumulated, stored and passed

their indigenous knowledge systems to their young. This methodology is a better tool than the quantitative in exploring how this knowledge can be used to enhance the achievement of EFA goals. This approach also offered me an opportunity to interact with other stakeholders in the provision of knowledge systems through formal, informal, and non-formal systems. I have borrowed ideas from ethnographic research, following procedures outlined by Goetz *et al.*, (1984), Hammersley (1990), and Patton (1990). Weiss (1998) treats ethnography as a prototypical qualitative method, whose origin is with anthropological research. Ethnography is the approach that anthropologists use in studying a culture, whether in a rural area or city. They usually spend a long time in the in the field, participating in activities with the people whom they are studying, observing what they are doing, talking with them about what they think and mean, and over time coming to absorb the norms and ideas of their subjects (Weiss, 1998; Hammersley, 1990; Patton, 1990; Freebody, 2003).

In order to explore individuals’ perspectives, experiences, behaviours and feelings (Patton, 1990; Bryman, 2001), this research adopted the interpretive and exploratory dimensions. This provided me an opportunity to analyse human motives, beliefs, and values. Realizing that one of the challenges that qualitative researchers meet in the field is how to narrow the gap between philosophy and practice, I took into consideration the suggested philosophical assumptions that need to be given serious consideration as discussed by Creswell (1998:75).

Figure 24: The Philosophical Assumptions with Implications for Practice in Qualitative research.

Assumption	Question	Characteristic	Implication for practice (Examples)
Ontological	What is the nature of reality?	Reality is subjective and multiple as seen by participants in the study.	Researcher uses quotes and themes in words of participants and provides evidence of different perspectives
Epistemological	What is the relationship between the researcher and that being researched?	Researcher attempts to lessen distance between himself/herself/ themselves and that being researched	Researcher collaborates, spends time in field with participants and becomes an “insider”.
Axiological	What is the role of values	Researcher acknowledges that research is value laden and value biases are present.	Researcher openly discusses values that shape the narratives and includes own interpretation in conjunction with interpretation of participants.
Rhetorical	What is the language of research?	Researcher writes in informal style using the personal voice and uses qualitative terms and limited definitions	Researcher uses an engaging style of narrative, may use first person pronoun and employs the language of qualitative approach.
Methodological	What is the process of research?	Researcher uses inductive logic, studies the topic within its context, and uses an emerging design	Researcher works with particulars (details) before generalization, describes in detail the context of the study and continually revises questions from experiences in the field.

Source: Creswell (1997: 75)

A more comprehensible analysis of these aspects has been done through the use of the following qualitatively based instruments:

1. Participant observation.
2. Interviews (Semi-structured, open ended).
3. Focus Group Discussion.
4. Documents analysis.
5. Classroom Observations.
6. Check list exercise on Pupils' knowledge on AIKS whether from school or community.
7. Documentation of some of the beliefs taboos from the Chewa AIKS in line with school curriculum.
8. Field notes.

This study has employed the use of triangulation. Triangulation was initially used to refer to the use of more than one method in a given inquiry. This is to avoid a situation where research results are generated exclusively on one method. This is the view advanced by many researchers (Patton, 1990; Bryman 2001; Freebody, 2003). The assumption is that methods have weaknesses and exclusive reliance on one method could bias or even distort the researcher's work being investigated. Triangulation that involves the use of more than one method is known as methodological triangulation while that involving more than one theoretical scheme is known as theory triangulation. This study has employed both methodological and theoretical triangulations. Although methodological triangulation (Shulamit, 1988) is used in this study, equal strength has been given to all the methods used. The argument advanced with this approach is that the more the methods contrast with each other, the greater the researcher's confidence in the findings. I have used my participant- observation to check on findings from interviews, focus group discussions, and document analysis and vice versa (Weiss, 1998; Bryman, 2001). I feel there is a danger in choosing one research method as the main instrument of your study and using the other ones to complement it. In a situation where they do not seem to complement, the temptation of making them do so is very high. This is so in that you think that whatever findings your so- called main research instrument brings out is a true reflection of your research (Yin, 1994; Patton 1990). However, when all the research instruments are at par and findings do not seem to suggest one and the same thing, you may go back to research questions and come up with a proper focus of your

research as the problem could be that your research questions could be focusing on different things (Cohen *et al.*, 2000; Bryman, 2001; Freebody, 2003).

This is in line with what Patton (1990: 244) says:

Multiple source of information are sought and used because no single source of information can be trusted to provide a comprehensive perspective on the program. By using a combination of observations, interviews, document analysis and focus group discussions, the field worker is able to use different data sources to validate and crosscheck findings. Each type and source of data collection instrument, however, has strengths and weakness.

Participant observation

Participant-observation is observation of a scene by a researcher who takes part in the activities and events with an intention of getting close to the action and to get a feel for what things mean to the actors (Shulamit, 1988). Sillitoe *et al.*, (2005:49) define participant observation as a "method for collection of data through intense interaction by the researcher with respondents in the research setting over the medium to long term." Participant observation can be used by both qualitative and quantitative approaches. When used as a qualitative instrument, as the case is in this study, the method offers the researcher opportunities such as those observed by Shulamit (1988:240):

Participant observation makes the researcher use his/her reflexive researching stance to uncover the basic assumptions in the study. The self is used in research as an instrument, observer and also as a receiver and receptacle of experience that is to be explicated--- but when scientific instruments are used instead of human observers, we learn only about reality as it appears without personal involvement or interpersonal dialogue.

The usefulness of this method in this study, compared to other techniques and methods of data collection, is that it allows both direct and indirect collecting of data. It offers the researcher a chance to observe either from 'inside,' (where researcher participates in the situation under study) or 'outside,' (where the researcher does not necessarily become part of the situation being observed). In the former, the researcher joins the group, which is being observed and observes the behaviour in the members of the group, listening and taking part in their conversations. In the latter, the researcher may not even be identified by the observed (Bryman, 2004). In other words, participant observation, where the researcher participates from 'inside' can be said to be 'open' while that where the researcher observes from 'outside' can be said to be 'hidden (covered)'. Patton (1990: 209) calls the open observation 'overt' and the

hidden one ‘covert’. Sillitoe *et al.*, 2005:87) further guides what a researcher should do in participant observation:

The researcher observes and participates in the everyday affairs of the actors in the research setting without attempting to manage that setting or influence how events unfold. For this reason such studies have been termed ‘naturalistic enquiry’, with the intention generally being to produce ‘rich’ data (i.e. multifaceted descriptions) rather than reducing the complexity and diversity of social life to a limited number of variables.

My observation is that when you are a teacher, it is hard to be an ‘outsider’ in any observation making a ‘naturalistic enquiry’. You always find yourself interacting with the teacher and the pupils unintentionally. Your mere look at the teacher makes her or him take a particular stance in the lesson delivery. A mere look at your watch makes an impact on the teacher as he or she feels you are communicating something. Pupils are also very conscious of your presence and can notice the change of behaviour of their teacher and associate it with the researcher’s presence in the class. Participant observation can also be either structured or unstructured (Vogrinc, 2006) as seen below:

Figure 25: Types and Characteristics of Participant Observation

TYPES	CHARACTERISTICS
STRUCTURED	<ul style="list-style-type: none"> Investigator previously defines what and how the observation will go. Investigator defines what will be recorded and how it will be recorded. The duration of the observation is known
UNSTRUCTURED	<ul style="list-style-type: none"> Only more or less general features or rough basic contents categories are previously defined. The plan of the research is unstructured hence the observation unstructured. Based on holistic approach (aims at achieving as thorough insight into the situation, as possible). Gives possibility of noting down even previously unanticipated observations, relevant to the study.
OPEN (Overt)	<ul style="list-style-type: none"> Observer literally becomes group member Reveals his/her role of investigator to the other members of group Reveals what he/she wants to observe, purpose and course of research Ethical since members or the researcher can decide not to cooperate in the research for various reasons. Researcher may significantly influence the behaviour of the observed and the outcome by revealing identity and purpose of research. Data obtained may lack validity and reliability conclusions.
HIDDEN (Covered or Covert)	<ul style="list-style-type: none"> Reduces reactive effects and opens access to unapproachable group. Makes researcher be at par with other group members Cannot predict effects of groups’ actions on the subject being investigated. The revelation of covered observer during or after may harm and diminish confidence even to future investigation. Opens an opportunity of investigating hardly accessible and marginalised groups of people. Investigator to guarantee the anonymity and respect of the other members. Investigator must not lie directly nor intentionally harm the others.

Source: Adapted from Vogrinc (2006).

The structured observation seems to go along with the open one while the other two, hidden (covered) and unstructured seem to move in the same direction.

Advantages

- It is suitable for an indigenous knowledge research like this one as it can include children, women and men who cannot read or write.
- The researcher has at his/her disposal both verbal and non-verbal data.
- The researcher becomes an instrument for data collection and offers rare opportunity for researcher to do a self-analysis without being suppressed as the case is with other methods.
- It is not very expensive.
- Reality is perceived from someone inside (open/ overt).
- It provides a holistic approach of collecting information even that not expected.
- It allows the researcher to think of social life not as a set of elusive fixed laws but as a process of becoming.
- Offers researcher opportunities to interview the group even on issues he or she may not be able to completely understand.

(Shulamit, 1988; Bryman, 2004; Sillitoe *et al.*, 2005; Vogrinc, 2006).

Limitations

- It can be highly subjective.
- It can make the researcher take sides, thereby inhibiting the researcher's fact-finding.
- Rather than merely recording their behaviour, researcher can be judging it and end up with biased data.
- May jeopardize current or future research when researcher's hidden identity is discovered during or after the research.
- Identity of researcher's role may influence or change behaviour of people under study thereby producing unreliable and invalid conclusions.

(Shulamit, 1988; Yin, 1994; Bryman, 2004; Sillitoe *et al.*, 2005; Vogrinc, 2006).

This study employed unstructured and therefore, covered or covert observations, when researcher interacted with many respondents in their natural settings. These include, among many other situations and places, funeral gatherings, traditional ceremonies, local courts proceedings and on buses. Overt observations took place in schools and colleges during staff and departmental meetings and seminars. In these situations, the respondents were aware of my role as a researcher and in some instances even knew my identity. In such situations, the teachers and lectures needed

to know the purpose of the study and what role they were to play in the discussions that followed. Some of these interactions were followed by group discussions, using expert sampling techniques (Patton, 1990; Bryman, 2004).

Interviews

Interviews are a very important source of information to both qualitative and quantitative paradigms. The interview technique is usually classified as 'introspective' since it involves respondents reporting on themselves, their views, their beliefs and their interactions. It can also be useful to elicit factual data (Patton, 1990, Wallace, 1998). Interviews are a very useful way of collecting data. As noted by Patton (1990), people are more willing to talk in an interview than the case would be if they were asked to write. In fact as observed by McMillan *et al.*, (1993, 250) 'interviews are essentially vocal questionnaires whose preparation is somewhat similar to that of a questionnaire.

We commonly see interviews in three-part taxonomy: structured or fixed-responses, semi structured or unstructured or open-ended interviews (Freebody, 2003). Structured or fixed- response are those that restrict the domains of relevance of the talk to a predetermined set of questions and thus, by inference, a set of possible answers. Semi-structured interviews begin with a predetermined set of questions, but allow some latitude in the breadth of relevance. What is taken to be relevant to the interviewee is pursued. Unstructured or open-ended interviews are those where perhaps only a few highly general questions or issues are put across to the group of people being interviewed (Freebody, 2003).

The number of respondents involved in an interview is also a point to be considered. When only one respondent is involved in a given interview, it is called an individual interview as opposed to a group interview where a given number of respondents are interviewed at a time (Sarantakos, 2005). There are also a number of steps that must be taken into consideration by the researcher before embarking on the research. Some of these steps are:

- Developing interview guides based on the research questions.
- Avoid double barrelled or multiple barrelled questions.
- The identification of possible interview themes or subjects.
- Identifying the possible respondents from a given population.

- Decide mode of recording the interview (Note-taking, tape recording or both)
- Seek permission, arrange suitable time and place (Bryman, 2004; Sarantakos, 2005).

The steps above are germane not only to the interview encounter but to all tools and techniques by which data is generated. This for the simple reason that:

Data or information does not "lie around like sea-shells waiting to be picked up from the sea shore" (as positivists appear to think) but is generated in the encounter. That is why reflecting on the 'interface' between, and the potential 'agendas' of, the parties to such encounters is so important (Sillitoe *et al.*, 2005:109).

Advantages

- Can be used even among those who may not read and write.
- It is easy to interpret questions, which are prepared in English into the local languages. (My questions to the chiefs and other traditional leaders were in Chichewa and later translated into English).
- The researcher has a chance to check on the truthfulness of the response by seeking the same information in several ways at various stages of the interview.
- They give the participant an opportunity to ask for clarification when they do not understand the question and give the interviewer the opportunity to ask them to elaborate further on their answers.
- If the participant misinterprets the question the interviewer could follow up with a clarifying question.
- There is a guarantee that all questions will be attempted. The researcher has the control of the situation as he or she is the one asking questions (Wallace, 1998; Sarantakos, 2005).

My observation is that it is not always the case that interview guides must be in English. My interview guides for the traditional chiefs were in Chichewa and later translated into English. While it is true that the researcher is in control of the situation, interviewing traditional chiefs and leaders is different. They still treat you as their subject who should do more listening than talking and you are conscious of that. As a Chewa myself, I was aware you do not interrupt the chief when he is talking. You are said to be 'stepping on his head' (*ponda mfumu pamutu*). That way it is like the chief was in control of the discussion (See critique to qualitative research in this chapter). These are issues entrenched in the Chewa AIKS.

Limitations

- They can be subjective.
- The participants may be unwilling to report on their true feelings.

- The interviewer can ask leading questions in support of a particular view.
- May be as a result of power structures and gender relations, some participants in-group interviews may not participate freely.
- They are time consuming and sometimes so much is collected yet little is relevant to the research.

I used interviews because of the advantages stated above. Moreover, unstructured and semi-structured interviews are most commonly used with indigenous knowledge research like this one, which are about human affairs (Yin, 1994; Sillitoe *et al.*, 2005). In consideration of the above limitations, I settled down the participants by making introductions and started by asking surface questions so that they act as icebreakers and encourage the respondents for fruitful participation. It was vital, particularly with villagers, to assure them that there were neither right nor wrong answers but simply their own opinion. I feel the respondents fully and freely participated in these discussions without feeling judged by me, as I am their fellow Chewa. This would not have been the case if I were an outside researcher discussing issues about the Chewa people and their AIKS. However, I was always aware of the fact that I have gone to school and doing research while in UK painted a picture to the other Chewa people that I was not a hundred percent Chewa anymore. So the three 'jackets' I was wearing during my research i.e. a researcher, a Chewa, a person living a perceived better life in town, always imposed some limitation on my participation in these groups.

Permission to record the proceedings was sought from individual participants. They were assured of confidentiality. Considering that in an interview, a researcher collects only what the participant chooses to tell him or her, other research tools were used as stated above. These helped in checking participants who may lack consistency and tell different things at different times.

Focus Group Discussion

Focus groups are somewhat informal techniques that can help you assess respondents' needs and feelings both before, say a policy intervention design and long after implementation. In a focus group, you bring together a number of respondents to discuss issues and concerns about the features of the problem. The group typically lasts about two hours and is run by an interviewee or a moderator who maintains the group's focus. Focus groups are a powerful means to evaluate services or test new ideas. Basically, focus groups are interviews, but of six-ten people at the same time in

the same group. One can get a great deal of information during a focus group session. In agreement with the above views Sillitoe *et al.*, (2005:177) hold that:

Focus group is a tool of studying ideas in a group context and is based on the belief that the whole is greater than the sum of its parts. Its purpose is to generate new information, clarify further points of detail, validate information derived through other methods, and build consensus between group members. The goal is to get closer to participants' understanding of the topic.

Focus Groups are known for a number of reasons. One of them is that they often bring out respondents' immediate reactions and ideas, making it possible to observe some group dynamics and organizational issues. For participants, the focus-group session should make them feel free. This atmosphere allows the flow of ideas on the subject under discussion. This is so in that these discussions are often relatively unstructured. The interviewee or moderator follow a pre-planned script of specific issues and set goals for the type of information to be gathered. During the group session, the moderator has the difficult job of keeping the discussion on track without inhibiting the flow of ideas and comments. It is the job for the moderator to ensure that all group members contribute to the discussion and must avoid letting one participant's opinions dominate. At the same time, the moderator should avoid putting words into the mouth of group members. After the session, data analysis can be as simple as having the moderator write a short report summing up the prevailing mood in the group, illustrated with a few colourful quotes. There are challenges that researchers planning to use Focus Group must consider. McNamara (1999:9) sums up some of the challenges faced by interviewees as moderators in Focus Groups as follows:

- Sorting out what is important.
- Understanding implications.
- Decoding symbolism.
- Unravelling complex situations.
- Interpreting ambiguous behaviour.
- Designing persuasion and predicting behaviour.
- Developing strategies and new ideas.

I was lucky that in one focus group discussion with chief Kawaza's counsellors, the court clerk was in attendance and was able to direct the discussions when the counsellors were going out of topic. In order to enhance effective participation in any focus group discussion or indeed any group discussion, there are strategies that

can be followed. Nwangwu, 2001) identifies various types of participatory strategies that can be used with focus group or group discussions and justifies among them the ones that have exhibited strong attributes of true participation. She lists them as:

- Participatory Learning and Action (PLA).
- Participatory Rural Appraisal (PRA).
- Methods for Active Participatory (MAP).
- Technology of Participation (ToP).

ToP seems to be an effective strategy to be used with focus group discussions or indeed, group discussions. This is a technique of discussing commonly shared concerns among groups within a structure. Nwangwu (2001) observes that often, when groups discuss issues of critical concern, problems always surface. Discussions generate into blames, scapegoats and complaint on how and why one thing was done other than the other. ToP allows a group to focus on the importance of the event, and put the event into perspective without becoming emotional. This is achieved because ToP is focused, guided and structured. This way the rowdiness that arises when everyone wants to contribute at the same time is reduced though not avoided completely. Questions are structured following definite levels stipulated by Nwangwu (2001:21 as follows:

1. Objective level (factual questions about the phenomenon in focus. Respondents speak about things they can see, hear, feel, smell etc).
2. Reflective level (questions on individual's emotions, feelings and associations are posed).
3. Interpretive level (questions requiring respondents to consider the meaning and value of the event and its significance for the group).
4. Decision level (questions that will make the respondents conceive a response to the event and make a decision on what to do).

Advantages

- It is an efficient data collecting technique as it generates data from a number of people rather than one in an interview.
- The group dynamics lead to a focus on the most important topics and issues.
- It is easy to assess the extent to which there is a relatively consistent, shared view by participants.
- Offers an opportunity to bring together people either of the same social group or different to discuss one topic.

- Participants are free to agree or disagree. Whichever the way, rich data on the topic is being generated.
- Respondents can decide to gather at a place of their choice making the discussion take a normal setting, conducive for a free and open discussion.

I found that sometimes participants do not agree on a single point. In one focus group discussion with teachers, they did not agree on the models of hybridizing the Chewa AIKS with the formal school curriculum. They have to put it to a vote. (see chapter six).

Limitations

- There is always a possibility of running more than one focus group as the outcome of any single session may not be representative.
- Discussions can get sidetracked.
- Keeping the discussion going on and not astray is a big challenge on the part of an interviewee as a moderator.
- There is also a possibility of some participants not participating and allow themselves to be inhibited by the dominators.
- More time is needed for this exercise to give required results,
- Number of questions to be discussed is limited as each member tries to talk.

(McNamara, 1999); Denscombe, 2002; Silverman, 2001; 2005).

One participant in the focus group discussion at chief Kawaza's palace did not talk much, yet directed the discussion by shaking and nodding his head each time somebody was contributing something. Despite these observations, you can still get a lot more from focus groups as McNamara 1999: 4) puts it:

Focus groups are a laboratory in which you get much deeper feelings, implicit beliefs, hidden attitudes, and secret practices. But more importantly, focus groups are a laboratory in which you can experiment with going beyond the present to what can be, beyond what is there: You can discover, how to change beliefs and behaviour, how to persuade, how to teach, how to communicate. Focus groups are persuasion design laboratory in which you can develop test and new approaches.

I used focus group discussions as another corroborating device in this study, based on its advantages given in this thesis. This is also in line with the justifications given by Casley *et al.*, (1988: 28) on the purpose of focus group discussions in research studies:

Focus group discussions help to assess needs, develop interventions, test new ideas or programs, improve existing programs and generate a range of ideas on a particular subject as background information for constructing more questionnaires [or interviews]

Documentary analysis

Weiss (1998:260) holds that documents are “a good place to search for answers. They provide a useful check on information gathered in an interview.” He further adds that when “other techniques fail to resolve a question, documentary evidence can provide a convincing answer.” Another view shared by Hammersley *et al.*, (1995:156) about documentary evidence is that “it would be hard to conceive of anything approaching ethnographic account without some attention to documentary material in use”. Apart from providing evidence, Weiss (1998) has noted that documentary analysis also allows the analyst to become thoroughly familiar with the materials and helps to save on time. The usefulness of documents as research tools is that they help corroborate and strengthen the evidence gathered using other tools.

Advantages

- Can provide reliable and quality information.
- Often documents are written by authors without knowledge of future research work that may make use of their work.
- More than one source, giving a chance to countercheck the information.
- Offers a chance to researchers to study past events and issues.

Limitations

- Some documents are not complete and sometimes with outdated information.
- Could be biased, as they depend much on the point of view of the writer.
- Could be time consuming to read volumes of these documents.
- Some documents are difficult to access due to legal implications.

This research made use of document analysis. The document analysis consisted largely of education reforms dating back from the pre-colonial periods to the independent and post independent periods in Zambia. Current journals on EFA and UNESCO Annual Reports on EFA were another source of research materials. Research work done, among the Chewa by other researchers (Serpell, 1993; Smith, 1995) was also made use of in this study.

Classroom Observations

Class observation is another tool that can be used to verify what has been gathered through other tools such as teachers' focus group discussions and interviews. In other words, observations of this nature are conducted so as to serve as another source of evidence in the study (Yin, 1994). This is in line with what Cohen *et al.*, (2000:305) say about class observations:

Enables researchers to understand the context of programs, to be open ended and inductive, to see things that might otherwise be unconsciously missed, to discover things that participants might not freely talk about in interview situations, to move beyond perception based data and to access personal knowledge (Cohen *et al.*, 2000:305).

The assumption here is that observations enable researchers to gather data on the physical, human interaction and program settings (Morrison, 1993; Cohen *et al.*, 2000).

Advantages

- Enables researcher to gather data on a physical, human, and, classroom setting environment.
- Offers rare opportunities to the researcher to observe both verbal and non-verbal expression, lesson notes, schemes of work, and the teaching aids used and displayed in the classrooms.
- Offers first hand information about what really happens in the classroom (Patton, 1990; Yin, 1994, Cohen *et al.*, 2000).

Limitation

- May get biased data if the observation is pre arranged as things may just be staged.
- Needs several observations to come up with true picture of what really goes on in class other than just few sittings.
- Constant use of observation guidelines and taking notes may influence or change the behaviour of those observed.

In an indigenous knowledge research, classroom observation offers an opportunity to the researcher to observe if pupils bring any indigenous knowledge to the classroom and if teachers make use of that in their lesson deliveries. In the case of this study, the check list was conducted instead of the classroom observation. The checklist enabled me to find out what indigenous knowledge pupils know from their communities. The teachers had no lesson plans and said the inclusion of the Chewa AIKS into their lessons was a new idea they had just been introduced to through the pilot program of

producing a localized curriculum discussed in chapter three. However, I had a chance to look at textbooks used by teachers in their schemes of work and lesson plans to see if they accommodate the Chewa AIKS or any IKS (see chapter six for respondents' comments).

Field notes

Field notes as a research tool is widely used in observational studies in general and ethnographies, in particular, (Mulhall, 2003). These notes take particular form, meaning and use, depending on the nature of the study. It is important to know when, where and how these notes are to be taken. Mulhall (2003) says the field, where notes are taken, "represents a natural entity out there which needs to be objectively described by the observer who takes notes," (Mulhall, (2003:310).

Advantages

- Information gathered while people are behaving in natural way has great significance as it improves the validity of the data collected.
- Gives a researcher a participating-to-write approach.
- Offers a rare chance to record things as they happen or shortly afterwards
- Researcher can reflect on the notes later.
- Gives chance to record and analyze data at the same time.
- Researcher may just jot down phrases and expand them later
- Easy to recall what you can see and hear (Hammersley *et al.*, 1995; Mulhall, 2003; Silverman, 2005).

Limitations

- If too much time is devoted to writing notes, the deeper intuitive experience of being within a culture could be lost.
- Field notes could be messy, loose texts that may make no claim to be part of the final outcome.
- They could be comprehensible to their author, thereby lack evidence for their validity and reliability.
- When researcher is not an 'insider', reactions from those observed are unpredictable.
- Notes can easily be lost.
- Use of general terms to describe specific actions and conditions.

My interaction with various people during the data collection in Zambia accorded me rare opportunities to collect information under less restricted circumstances, using field notes.

These notes were jotted down in various settings including around the fire in the evenings, while sitting under notable tree shades that act as “village parliaments”, at funerals, ceremonies and school staff meetings. Generally, I would say throughout the fieldwork, taking notes and later expanding them into detailed notes was a day-to-day activity. These notes made my field work look organized. Even in situations where the discussions or interviews were tape recorded, I still took notes. This even made transcribing some of my recordings easier.

Check List on pupils' knowledge in farming/gardening skills

Sillitoe *et al.*, (2005) say that in indigenous knowledge research, there may be need to identify the activities, products or services that the participants of any development oriented program consider as very important in the livelihood of their community. This can be done through what they call “livelihood mapping” (Sillitoe, *et al.*, 2005:134). Although no actual livelihood mapping was conducted in this study, the interviews and focus group findings from both the educational officials, curricula developers and traditional leaders showed the need to hybridize the current school curriculum with practical skills embedded in AIKS (see Table 9). It is this knowledge that made me come up with a checklist of those skills considered important among the Chewa people that the respondents felt needed to be part of the primary school curriculum to enhance the achievement of EFA goals.

The designed checklist exercise aimed at checking what practical skills from the Chewa AIKS pupils knew and where they learnt about them- school or community. This checklist also acted as an effective tool of checking the consistency of the findings through the Focus Group Discussions and the interviews conducted with teachers and mentors, in the case of community schools. While it is true that most learning is done informally and sometimes unconsciously (Rogers, 2003) the checklist was aimed at finding out more than just where they learnt the particular practical skill but how often they practice those skills.

Advantages

- Offered a chance for the pupils to reflect on things they have learnt before.
- The exercise reminded pupils that learning is not only done at school.
- Opened an opportunity for peer teaching as pupils knew who had what skill.

- Teachers conducting the checklist knew pupils' homes and the gardening and farming activities they do at home.

Limitations

- The pupils were only given two choices to choose from, community or school.
- In the absence of the alternative answer like, "no idea", guess work was possible.

Sampling and data collection procedures

Location of the study

My fieldwork was undertaken in Katete District, situated in the Eastern Province, and in Lusaka, the capital city of Zambia. Katete is the headquarters of the Chewa people in Zambia. The paramount chief *Kalonga Gawa Undi* of the Chewa people has his palace at *Mkaika*. This place is near the Katete shopping centre. Given that my study focused on the Chewa AIKS, there couldn't have any better place to conduct my fieldwork other than Katete, the headquarters of the Chewa people, so to put. Permission to do research in the area was obtained from the paramount chief himself. The paramount chief allowed me to go ahead with the research in his area. This was an oral²³ permission. His spoken word was sufficient authority.

Lusaka was another site for this research, as already mentioned. Other than being the capital city of Zambia, Lusaka was chosen for this research because it houses a number of ministries and departments targeted in my research. The Ministry of Education gave me permission to visit and interview any official in any of its departments. The curriculum Development Centre, (CDC), Examination Council of Zambia (ECZ) and the University of Zambia are all under the Ministry of Education. Permission granted by the Permanent secretary for the ministry was adequate to allow me to conduct my research in any of the departments mentioned (see appendix A).

My fieldwork was from the month of November 2005 to end of February 2006. Before my trip to Zambia, I was able to access a lot of information from Zambia by email and phone from many respondents. For example, a work mate was able to

²³ The oral permission was not as a result of lack of adequate writing skills. The Paramount Chief is a fully qualified electrical engineer who was working in the only electrical company in the country and enjoying a top position. He resigned his professional job after being enthroned as the paramount chief of the Chewa people.

videotape the whole *Kulamba* ceremony of the Chewa people for me. As explained earlier, this is a thanks-giving ceremony where all the Chewa chiefs in Zambia and representatives from Malawi, Mozambique bring tributes to the paramount chief Gawa Undi of the Chewa people. They also give reports on the state of affairs in the areas they administer on his behalf (see picture 6).

Target population

The target population of this study includes, school teachers, college and University lectures, pupils, the paramount and subordinate chiefs of the Chewa people in Katete District, village heads, traditional midwives, community elders, counsellors and other traditional leaders, curriculum specialists, Ministry of education officials at various levels, examination Council of Zambia research Department officers, other non governmental organisation officials involved with formal and non formal education, Community Development officials, Technical and Vocational Entrepreneurship Training Authority (TEVETA) Directors of standards and business community (see conceptual framework in figure 1).

Accessible Population

Due to meagre finances, time constraints, and ethical considerations, it was not possible to interview all the respondents targeted in the District and Provinces of location of study. While all the chiefs targeted in the District were interviewed, a number of village heads and other traditional leaders targeted for Focus Group Discussions were not done. This was as a result of practical advice and wisdom given by the subordinate chiefs interviewed. In some areas the villages are so apart that bringing a number of village heads and other elders together was going to be difficult. Another observation was that a number of newly appointed village heads are young people who may not necessarily be rich in Chewa AIKS. These are contentious issues about the Chewa AIKS, where in one case it is assumed the Chewa AIKS is shared by all in a given setting, while at the same time there are other people who are perceived to know more than others. Perhaps that is where age matters since the older one gets the more knowledge one is assumed to have accumulated (see chapter four). This was again going to bring in issues involving power relations that need to be considered before organising focus groups as discussed earlier in this chapter. Interviewing individuals identified as having rich information, using purposeful sampling, appeared

more realistic and reasonable than somebody who has the title 'village head', but not very knowledgeable in Chewa IKS. In support of this view, Patton (1990:168) says:

The logic and power of purposeful sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research.

As it was not possible to collect data from all the individuals targeted in the population, those reached formed a sample. This was drawn using purposeful sampling. There are various strategies for purposeful sampling such as snowball, expert, homogeneous, typical case, stratified purposeful, critical case, etc samplings (Patton 1990). Details of how these sampling procedures were arrived at are provided in the subsequent sections of this chapter.

The selection of respondents for interviews and focus groups from the Chewa people

Selection of the Paramount Chief

The Chewa people in Zambia, Malawi, and Mozambique have only one paramount chief Kalonga Gawa Undi. In this case extreme case sampling was used. Patton (1990:169) describes extreme sampling as one type of purposeful sampling where the researcher selects "cases that are rich in information because they are unusual or special in some way or highly enlightened." As the paramount chief of the Chewa people, Kalonga Gawa Undi is deemed to be a notable figure from where this research was to start from. It was imperative that he was to be the first to be interviewed in order to get permission to interview the other chiefs and other targeted elders in his area. Katete district has three traditional chiefs, bringing the number to four traditional leaders, including the paramount chief. One notable thing about this paramount chief is that he is a qualified electrical engineer from the University of Zambia and worked for the main electricity supplying company in the country until he was installed as the paramount chief of the Chewa people in 2004. I would argue that his appointment signifies a very big and vital societal transformation change. He is a good example of a hybrid.

Selection of the subordinate chiefs and other traditional elders

In order to have access to the traditional Chewa respondents in this study, I used snowball sampling technique or chain sampling. In snowball sampling, the researcher

begins by identifying someone who meets the criteria for inclusion in the study (Patton, 1990; Miller *et al.*, 2003). The researcher, later, asks them to recommend others who they may know who also meet the criteria. Snowball sampling is especially useful when you are trying to reach populations that are inaccessible or hard to find. Reaching traditional rulers like the paramount chief and other chiefs, women counsellors, elders who are perceived as custodians of AIKS and individuals in education with rich knowledge on EFA is not easy as these fall in the category that Miller *et al.*, (2003: 275) call 'concealed populations.' In this research, the paramount chief Gawa Undi of the Chewa people and one of his counsellors, were interviewed first to assist in the selection of the subordinate chiefs to be interviewed. The paramount chief's *nduna* (counsellor) advised the researcher to meet two other chiefs. This was not because the other chief left out was viewed not to be more knowledgeable than the two selected.²⁴ The reason was because I am (researcher) this chief's subject. The paramount chief's *nduna* (jokingly said, "*Sinifuna kuti muzikachita chisuwani uko ndi mfumu yanu mmalo mogwirira nchito*" which translated in English literally means, "I do not want you to be with your chief and start joking around instead of doing serious work"). However, I decided to interview the chief who was left out. In total, all the four traditional chiefs in the district were interviewed. In one case a follow up interview was organised and conducted as the traditional leader had promised some literature on the Chewa people. All the four chiefs could be reached by mobile phone, though it has to be prearranged to enable them stand on some anthill to capture the network. Through snowball sampling, selected elders, female and male counsellors, midwives also known as the traditional birth attendants (TBA), medicine men and village heads considered highly knowledgeable by the community on the Chewa AIKS, were among the twenty-three respondents interviewed. In the case of the TBAs and the medicine people, one would say that intensity sampling was also used in addition to snowball sampling. Patton (1990: 171) describes intensity sampling as one that "involves selecting respondents who are information-rich cases that manifest the phenomenon of interest intensity." The TBAs and medicine people seem to enjoy the status of being 'professional'

²⁴ Paramount chief Gawa Undi has given each chief in his kingdom responsibilities to preside over specific issues ranging from witchcraft cases, the cultural dance of *Gule wamkulu* (The great dance of the Chewa people), land disputes, life skills, initiation ceremonies for young girls known as *chinamwali* and many others.

people in their communities and command a lot of respect. Those interviewed were very happy and more than willing to share their experiences as presented in chapter six.

Selection of Focus Groups

I visited chief Kalawaza's palace at a time when a full council of the chief's counsellors was in session presiding over land disputes, marital problems and other cases brought in by the subjects. A Focus Group Discussion was conducted with all the counsellors present. A sample arrived in such circumstances is what Patton (1990:173) calls "a homogeneous sample." The counsellors who constituted the focus group, in this case belong to the same social group of the chief's *Indunas* (counsellors). This focus group was followed by individual interviews with two counsellors who seemed more informed than the others. Expert sampling was employed in this case (Patton, 1990; Silverman, 2005). The same approach was followed in the organisation of other focus group meetings. In determining the number of people to constitute a focus group, I did not just look at the average number of people that are suggested should constitute a focus group alone. I, as well, considered suggestions given by Krueger *et al.*, (2000: 71) who say:

The focus group is characterized by homogeneity but with sufficient variation amongst participants to allow for contrasting opinion.

Four more Focus Group Discussions, involving primary school teachers, teaching Grade 7 pupils, were conducted in this study. These focus group discussions were follow-ups to the four classroom observations conducted earlier, involving the same teachers. An observation checklist, with specific things to be observed (see appendix) was used. A Focus Group Discussion, involving *alangizi* (women counsellors) and the TBAs was conducted. The other Focus Group Discussion was that stated above involving the full advisory council of one of the chiefs interviewed, chief Kawaza. This means that a total of **six** Focus Group Discussions were conducted.

As a means of collecting more data and clarifications, a number of one-to-one semi-structured interviews were conducted with key informants identified in these six Focus Group Discussions. These were done in order to collect in-depth information on particular issues. Expert sampling was used to select the respondents included in the follow up interviews. Expert sampling involves the assembling of a sample of persons

with known or demonstrable experience and expertise in some areas. This is like convening an expert panel consisting of persons with acknowledged experience and insight on the topic (Patton, 1990).

Selection of schools in Katete District

Four schools were sampled within Katete district. With the assistance from the Katete District Education Board Officials, purposeful sampling was used to select two community schools, one from the Boma, the peri-urban area of the District and the other from the rural part of Katete. The choice of community schools was based on the assumption that the practical skills are part of the curriculum followed. The age of pupils was also a number factor. Most of the pupils in Community Schools are above fifteen years old. These would be in a position to explain how they acquired certain practical skills, like farming and gardening common in the area. Two government schools, one from Katete Boma and the other from the rural part of the District were also sampled.

I observed four Grade 7 teachers in these four schools- two government and two community schools. The Grade seven pupils were chosen because of the ages of the pupils. An earlier discussion with the education officials at the District showed that the knowledge of indigenous literacies in practical skills would not be very effectively checked with pupils of the lower grades because of their ages. They advised me to consider visiting two community schools, one in the township and another from the rural parts of the District.

Selection of other interviewees in the District and Province

Katete district is the headquarters for Community Development Department in the province. The provincial Community Development officer was among those interviewed. Another interview with the program director, working for one community radio station in the province, was conducted and recorded. The program was on the use of folk stories, taboos, sayings and proverbs in the teaching of the young among the Chewa people. In the two cases above purposeful sampling was used (Patton, 1990). In summary, a total of **twenty-six** semi structured and open-ended interviews, using snowball and purposeful sampling, were conducted in Katete

district and Eastern Province. All the interviews, save three, were recorded and notes taken.

Selection of Interviewees in Lusaka

In Lusaka, a number of interviews were conducted using various techniques of purposeful sampling.

University of Zambia (UNZA)

Interviews were conducted with three professors in the School of Education. They were all recorded with their permission. Only one was targeted but suggested two more other people (including the Dean of Education at the Open University, not originally targeted) to be interviewed (Snowball sampling). Contacts were established with all the three respondents for further follow-ups and clarifications. Documents, lecture notes and a book entitled "The Significance of Schooling in Zambia" written by the vice chancellor of UNZA were accessed. This publication was based on his research study conducted in Katete district among the Chewa people.

Open University-

An interview with the Dean of the University, specialised in African Studies, was conducted and recorded. Names of other people to be seen at UNZA were suggested and interviews with all the three suggested professors (snowball sampling) were conducted, as mentioned above.

Curriculum Development Centre (CDC)

Five interviews with curriculum specialists were conducted and recorded. Notable was the interview with one specialist attached to the development and implementation of what is called a 'Localised curriculum.' This is a curriculum that includes what is known as 'Community studies.' I only came to know about this development during data collection. Community studies are mainly practical skills drawn from the indigenous and local knowledge systems in the country.

Examination Council of Zambia (ECZ)

An interview with the research officer at ECZ was conducted. This is the board in charge of assessment of pupils and students for certification purposes. The officer in charge of research at the Council was deemed highly knowledgeable and well placed.

Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA)

This is a department under the Ministry of Science and Technology

An interview with one officer in charge of entrepreneurship programs for school leavers and out of school youths was conducted and recorded. The Director of Standards at TEVETA suggested the person to be the respondent.

Ministry of Education officials

Four interviews were conducted following purposeful sampling. These were Director of Education Standards, Director of Distant Education, senior officer in Distant Education Department, senior standards officer in mathematics and a contributor to the production of the localised curriculum manual produced by the Directorate of Standards and Curriculum. A business person, interested in the inclusion of practical skills in the school curriculum was interviewed. He volunteered to be interviewed after learning about my research topic from his friend.

Plan International Organisation

An interview was organised with the education officer for this Non governmental Organisation (NGO). This NGO has a project in one district in the Eastern Province and the respondent is the focal person for that program. The project looks at how local communities can be involved in the teaching of local skills and material production in the Primary schools. The interview was done in Chipata and recorded. In summary, there were a total of **seventeen** interviews conducted in Lusaka and Chipata. This brings the number of interviews conducted in this research to **forty-three**.

Ministry of Community Development and Social Services

An interview was conducted with the Provincial Community Development officer-in charge at Katete provincial office. Unlike other ministries that have their provincial

headquarters in Chipata, the headquarters of the Eastern Province, the Community Development and Social Services ministry has its provincial headquarters in Katete District.

Below is a table showing the total numbers of interviews Focus Group Discussions, and observations that were conducted. The table shows the planned work and actual work done.

Figure 26: Focus Group Discussions (F.G.D), Class Observations (OB) and interviews targeted as opposed to those conducted

	F.G.D planned	F.G.D Conducted	Observe. Planned	Observe. Conducted	Pupils targeted	Pupils checked	Interviews targeted	Interview conducted
KATETE	8	6	2	4	80	200	12	26
LUSAKA	0	0	0	0	0	0	9	17
TOTALS	8	6	2	4	80	200	21	43

Check List for pupils on AIKS knowledge.

A total of **200** pupils (**89** girls and **111** boys) from the selected four schools in the district were given a designed checklist exercise. The pupils were all the Grade 7 pupils in the four schools. Although the checklist was conducted school by school, the presentation of the findings has been combined as the focus of the research instrument was to give a general picture on whether pupils have the farming and gardening skills and where they learnt or acquired them. The administering of this exercise was done by the class teachers except in one school, Kaingo, where the headmaster was involved. This was during normal class period. The gender disparity was noticed and ignored as it was not the focus of the study. The teachers who were involved in this exercise were fully prepared for it beforehand. The exercise was aimed at checking what practical skills from the AIKS pupils knew and where they learnt about them-school or community. Furthermore, the designed check list helped in checking the consistency of the findings through the class observations, interviews and Focus Group Discussions conducted with teachers and mentors, in the case of community schools. This exercise was not prepared before going for data collection. The production of the manual on localised curriculum by the Curriculum Development specialists helped me come up with this exercise focusing on the knowledge on AIKS

pupils had and their source, whether the school or their communities. I was able to check what was in the document and what the traditional leaders were asking to be included in the school curriculum from AIKS. The community studies, the Curriculum Development Specialists came up with in their training manual cover the whole country, as seen below:

Figure 27: Practical skills/ Community Studies/ Indigenous/Local Knowledge System (AIKS)

<ul style="list-style-type: none"> • Gardening. • Farming. • Bee keeping. • Pottery. • Wood works. • Metal works. • Basketry and weaving. • Tannery (Leather works). • Performing Arts. • Animal husbandry. • Poultry. • Horticulture. • Confectioneries. • Language games. 	<ul style="list-style-type: none"> • Moral and behaviour moulding. • Knowledge of immediate environment. • Herbal medicine. • Hair saloon. • Proverbial wisdom. • Family planning and sexual Knowledge. • Entrepreneurship skills (<i>Tu nthemba</i> and second hand clothes). • Fishing. • Making of non alcoholic drinks. • Food preservation. • Brick and Block making.
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Source: MoE (2005).

The site for this study is a predominantly agricultural area. The traditional chiefs and elders came up with similar practical skills as those above. However, they put strong emphasis on farming and gardening (Agriculture). Therefore, the choice of these two practical skills was based on the findings from the interviews and focus group discussions (see chapter six of this thesis). The two were the main practical skills respondents felt should be included in the school curriculum. The assumptions are that if this research were conducted in another area, maybe respondents might have chosen other practical skills to be used in such an exercise. Farming and gardening are also among the many practical skills (see Figure 7) identified by the MoE through the Curriculum Development Centre (CDC) as part of the community studies to be included in the formal school curriculum called a localized curriculum (MoE, 2005).

They felt skills and knowledge of farming and gardening as done in their communities needed to be included in the school curriculum to improve quality of education and

attract more pupils to school. In order to make the check list focus on things relevant to the research, Pupils were asked specific questions about skills in farming and gardening. These skills are shown bellow:

Figure 28: AIKS practical skills focused in the check list

<ul style="list-style-type: none">• Weeding.• Transplanting.• Harvesting.• Making ridges.• Watering plants.• Marketing crops.• Making local drinks.	<ul style="list-style-type: none">• Crop rotation.• Fixing axes/hoes.• Watering.• Space seedlings.• Budding plants.• Fertilizing crops.
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If a pupil exhibited knowledge and experience in a number of those practical skills it suggested that that pupil has AIK in local agriculture.

Data Analysis and interpretation

This study used the method of inductive analysis as the basis for its data analysis.

Patton (1990:44) holds that:

The strategy of inductive designs is to allow the important analysis dimensions to emerge from patterns in the cases under study without presupposing in advance what the important dimensions will be.

Hammersley *et al.*, (1995:209) suggest that in analysing qualitative data, the initial task is to find concepts that help “make sense of what is going on”. Patton (1990) seems to suggest that these concepts about data analysis start arising during data collection and that marks the beginning of the analysis and this continues throughout the study. This shows that unlike in quantitative research, where data analysis only takes place after data collection, in qualitative studies, like this study, data collection and analysis go hand in hand to build a coherent interpretation of the data (Sarantakos, 2005). In this study, the genesis of data analysis was in the data collection phase itself and not after. From the focus group discussions, participant observation notes, classroom observations and numerous field notes, I began developing tentative understandings as regards the research questions. Patton (2002) holds that as the researcher continues interacting with the data, the researcher starts making sense out of what people have said by looking for patterns and integrating what different people have said after which they are interpreted (Patton, 2002).

Miles *et al.*, (1984) advice is that analysis should start off with data reduction. This involves careful reading of the recorded material, identification of the main emergent

themes and categorization of the data for analysis to data organization. This means that information should be assembled around certain themes and points. Usually the themes are related to the research questions devised. In this study, constructs, themes, and patterns were identified from the interviews, participant observations, focus group discussions, Chewa IKS check list, documentary and fieldwork notes. These themes have been used in the description of the phenomenon being studied, (Gall *et al.*, 1996: 565). This is because there are no hypotheses before the data collection. The understanding of the phenomenon under study and outcomes emerge from experience with the setting and theories. What is happening in a setting is grounded in direct program experience rather than imposed on the setting, (Patton, 1990; Silverman, 2000). The themes used were arrived at after doing some coding. Miles *et al.*, (1984:56) define codes as:

Tags or labels for assigning units or meaning to the descriptive or inferential information compiled during a study. Codes usually are attached to 'chunks' of varying size, words, phrases, sentences or whole paragraphs, connected or unconnected to a specific setting

The process used in this coding was firstly to review the transcripts as many times as I could. The review involved splitting and dissecting these transcripts into meaningful interpretations, which were reduced to quotations. It is these quotations from various participants that were put under some themes using what Miles *et al.*, (1984:69) calls "pattern coding," and describe pattern coding as "a way of grouping summaries [quotations] in to a small number of themes. In this thesis, the use of pattern coding proved very useful as it helped in identifying supporting, conflicting or even contradicting evidence coming from the traditional leaders on one hand and the policy-makers and implementers on the other on the provision of meaningful education to all. Krueger *et al.*, (2000) hold that the extensiveness and frequency of issues that come up during interviews or focus group discussions are important in arriving at what themes or reasons seem to dominate any discussion. It was with this view in mind that attention was also given to factors that are identified by Krueger *et al.*, (2000:136) which help identify which themes seem to receive more attention by the participants:

- Extensiveness (How many different respondents said the same thing).
- Specificity (Were comments made very specific and detailed?).

- Emotion (Did some participants speak with emotions, e.g. where they annoyed, frustrated or enthusiastic.
- Frequency (How frequent was the same thing mentioned and by who?)

In some cases, rather than just giving the English version of the transcript, the original expression in Chewa language has been given as well. This is aimed at capturing some emotions and specificity involved when giving out that particular piece of information as suggested by Krueger *et al.*, (2000). In cases where an idiom or proverb has been used, I found it imperative to give the original expression in Chewa as well. Some meanings or emphasis are lost when you translate idioms or proverbs from the Chewa language into English and vice versa. Considering that the transcriptions of the interviews and focus group discussions are relatively long, only extracts of the most important quotations raised during the interviews and discussions have been attached in the next chapter and the others in the Appendix (see the appendices for interviews and focus group discussions' dates). All copies of the original tapes CDs, DVD recordings and handwritten notes taken during the interviews and focus group discussions are also readily available on request.

Validity and Reliability concerns

Validity and reliability are important criteria in establishing and assessing the quality of any given research. Silverman (2005) argues that a research is pointless unless it shows the procedures used to ensure than methods used were reliable, rendering the findings as valid. A study that cannot measure what it claims cannot be said to valid.

Yin (1994:33) defines reliability and validity as follows:

- Construct validity – establishing correct operational measures for the concepts being studied.
- Internal validity – establishing a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationship.
- External validity – establishing the domain to which a study's findings can be generalised.
- Reliability – demonstrating that the operations of a study like the data collecting procedures can be repeated with the same results.

Guba *et al.*, (1985) propose that it is necessary to specify terms and ways of establishing and assessing the quality of qualitative research that provide an

alternative to reliability and validity. They propose two primary criteria for assessing a qualitative study. These are: (a) trustworthiness and, (b) authenticity.

(a) Trustworthiness:

This is made of four criteria, each of which has an equivalent criterion to those defined by Yin (1994) and put in parallel by Bryman (2001:272) as follows:

- Credibility, which parallels internal validity.
- Transferability, which parallels external validity.
- Dependability, which parallels reliability.
- Confirmability, which parallels objectivity.

In this study I have used the terms internal, external, construct validity and reliability as described by Yin (1994).

Internal validity

Bryman (2001) holds that this term is employed to show that the research was carried out according to the canons of good practice, which includes the ensuring that the subject of the phenomenon being studied was accurately identified and described. It also includes, to some extent, the submission of research findings to members of the social world who were studied for confirmation that the investigator has correctly understood that social world. This entails that internal validity depends on meeting the demands of causal reasoning rather than on the using a particular method alone. Causal inferences are internally valid only when the observed change or difference can be attributed confidently to a specific variable that has been isolated by the investigator (Patton, 1990; Bryman, 2001; 2004). The argument here is that a causal relationship exists if the cause preceded the effect. In such cases, there is need to ensure that the cause is related to the effect and that one cannot find any other plausible explanation for the effect other than the cause (Sarantakos, 2005). There is need then to control some factors such as age, gender, experience, status in society etc on the part of the participants in the research so that the outcomes are not fully controlled by these factors.

This study has used a number of techniques to achieve credibility. During fieldwork I had constant interaction with Ministry of Education officers at District, and provincial levels, teachers, lecturers and non-governmental officers who are the implementers of

EFA at the same level as educators with interest on the education of children. As a Chewa, I also interacted with the traditional leaders and elders, who are the custodians of AIKS, the phenomenon being investigated. The common grounds established, in both cases, ensured some levels of credibility. As explained already, I am not just a Chewa by tribe, but I have grown up among the Chewa people in the same province and district, thus internal validity was not just ensured but also increased.

The participants in all focus group discussions (Teachers, chief's counsellors, the traditional birth attendants (TBAs) and *Alangizi* (women counsellors) were 'homogeneously sampled' with same social status (Patton, 1990: 173).

The use of methodological and theoretical triangulation increased credibility and reliability as well (Guba *et al.*, 1985).

External validity

Patton (1990:490) says that:

Evaluation findings are most useful with regard to the particular setting from which those findings emerged, and the interpretation of findings is particular to those people who need and expect to use the information that has been generated by evaluation research. This perspective makes it clear that the purpose of evaluation research is to provide information that is useful and informs action.

This term is in line with external validity and refers to the generalisation of the findings to other population. Although much of the findings of this study refer to Katete District in the Eastern (among the Chewa people) and Lusaka, they convey some message on how the hybridization of AIKS and the formal school curriculum can be done and act as; 'attractors' to both parents and children and enhance the achievement of EFA goals. While this study does not in any way aim at generalising its findings to other populations involved with the implementation of EFA goals, the argument is it tries to appeal and impress upon all the stakeholders to look at ways and means of narrowing the gap between school and community by hybridizing the school culture and that of the community from where pupils come. This study could be replicated in other places such as Malawi and Mozambique, where Chewa people are also found. This could be with other strategies put in place.

Construct validity

In order to obtain construct validity, multi-method strategy should be used to gather data from multiple sources (Bryman, 2001). The argument advanced by many writers is that studies that use only one method are more vulnerable to errors linked to that particular method than studies that use multiple methods in which different types of data provide cross-data validity checks (Patton, 1990; Bryman, 2001; 2004; Silverman, 2005).

This study has used triangulation in order to achieve construct validity. Interviews, focus group discussions, class observations, participant observations, documentary analysis, field notes and a check list for grade seven pupils have all been used in this research to corroborate findings, facilitates seeing things from a different perspective, thereby ensuring construct validity.

(b) Authenticity:

Lincoln *et al.*, (1985) in Bryman (2001:274-5) raise thought provoking criteria that I would argue have a bearing on any indigenous research study. These criteria are:

- Fairness. (Does the research fairly represent different viewpoints among members of the social setting?)
- Ontological. (Does the research help members to arrive at a better understanding of their social milieu?)
- Educative. (Does the research help members to appreciate better the perspectives of other members of their social settings?)
- Catalytic. (Has the research acted as an impetus to members to engage in action to change their circumstances?)
- Tactical. (Has the research empowered members to take the steps necessary for engaging in action?)

As this was not an action research addressing a particular diagnosed problem (Bryman, 2001) we cannot claim the above criteria were met. Efforts were made to achieve fairness in the manner the research was conducted (see chapters five and six). Like any other research, this research aims at achieving these other criteria as reflected in the research questions used in this study (see chapters one and five).

Reliability

Bryman (2001:274) holds that reliability (confirmability) is a term:

Concerned with ensuring that, while recognising that complete objectivity is impossible in social research, the researcher can be shown to have acted in good faith by not overtly allowing personal values or theoretical inclinations manifestly to sway the conduct of the research and of the research findings derived from it.

Lincoln *et al.*, (1985) support this notion when they argue that reliability concerns the establishment of whether or not the research findings flow from the data collected. In order to obtain confirmability (reliability) in this study all the methods were used repeatedly. Four classroom observations were conducted in four schools, over 20 to 30 kilometres apart. The community schools are run by non-governmental organisation and often run by untrained teachers. These untrained teachers, commonly called 'mentors' are not on a salary. The communities in the school catchment's areas support them, in kind. Despite the different contexts, repeatable results were yielded. The focus group discussions and interviews again yielded similar results. One can therefore argue that the use of triangulation in this study has helped in this area as findings from one method relate to the findings from the other methods used, thereby increasing the reliability (Patton, 1990; Yin, 1994; Gull *et al.*, 1996; Bryman, 2001; 2004; Silverman, 2000; Silverman, 2001).

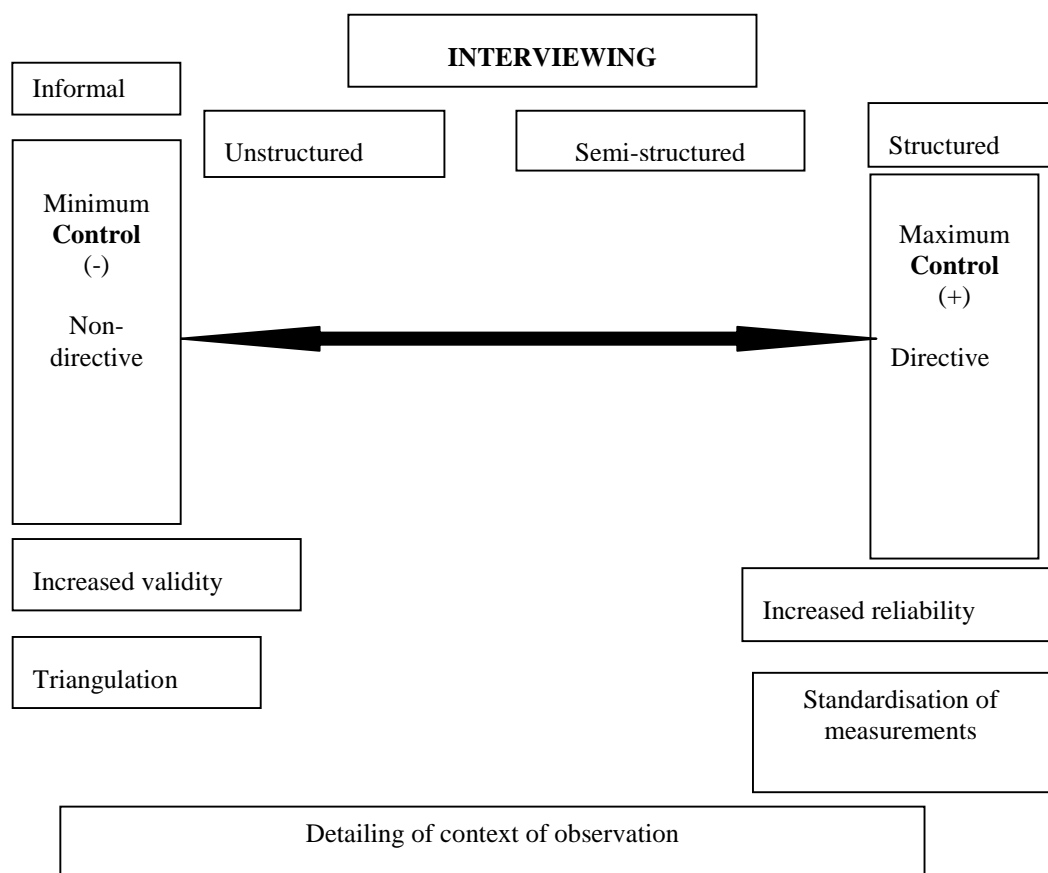
Yin's (1994) suggests that in order to increase reliability, the researcher should develop a case study database consisting of notes, documents, materials and narratives. In this context, the use of triangulation in this study has created a database of information on which to base the final result of the findings thereby increasing the reliability. The general observation Sillitoe *et al.*, (2005:109) makes is that:

Structured interview techniques have been considered as producing reliable but not necessarily valid data, while unstructured interview techniques have been considered as producing valid data whose reliability has to be substantiated through triangulation and the detailing of the relevant context of observation.

This observation validates the use of triangulation in research as it helps to check the weaknesses and short falls of individual research tools. Through their corroboration, validity and reliability are achieved as supported by Sillitoe *et al.*, 2005:109):

If generic data is sought, there is need for triangulation to establish the validity and reliability of the data. It is as well to check the information derived by one method in one context from particular respondents with that derived from other respondents (with similar and contrasting socio-economic characteristics) in other contexts using another method.

Figure 29: Interviewing and Triangulation



Source: Sillitoe *et al.*, (2005:109).

The use of structured and unstructured interview techniques and classroom and participant observation in this research seem to agree with what Sillitoe *et al.*, (2005) suggest is the way of achieving valid and reliable data results as shown in Figure 29 above.

Ethical issues

Ethical concerns are a very important component to any social research. Cohen *et al.*, (2000:347) hold that:

Ethical concerns encountered in Educational research in particular can be extremely complex and subtle and can frequently place researchers in a moral predicament, which may appear quite irresolvable.

When conducting research there are ethical issues to consider. These aim at protecting those involved in the research some of who may not be able to represent themselves in the event that they are misrepresented. This is particularly important for my work since I dealt with vulnerable women, men and children in a rural setting on the one

hand and traditional leaders who, on the other hand, are very concerned with their privacy and importance. When using focus groups, participant observation, structured, semi structured and unstructured interviews, class observation and documents analysis for my research, I considered it imperative that ethical considerations were put into consideration and followed.

My full identity was revealed to the paramount chief Gawa Undi of the Chewa people. In the case of the Chewa chief, full identity may include village, clan, and parents. Participants (clients) were not coerced into taking part; rather they were given an opportunity to make an informed and free choice to participate in the study. Participants were made aware that they may freely withdraw from the focus group or interviews at any time without risk or prejudice (Fairbrother, 2001). Participants were made to appreciate all implications through an elaborate explanation of the purpose of the study. Individual results were kept confidentially safe but I, however, explained to participants that the University of Nottingham, for assessment purposes, will access the final report.

Confidentiality was also maintained by not mentioning names in the report. Appointments were made prior to interviews or focus group discussions and in the case of meeting the paramount chief Gawa Undi and even the other traditional leaders. Research plans were submitted and were looked at by a group of locally-knowledgeable elders (the paramount chief and his counsellors) and I will abide by its recommendations to the maximum extent possible. Some presents were given to them, as you do not see a chief 'empty handed'. This is an established norm. All the other rituals of kneeling before the chief were observed as per their expectation of any visitor regardless of religion, colour, age or gender. The paramount chief Gawa Undi was assured he would receive a copy of the report for participants and other stakeholders to access.

Anonymity was observed with all informants including names of their institutions. In order to maintain anonymity, pseudo-names have been used through out this thesis. In some instances, official titles have been used. However, there are cases where anonymity has not possible. Here I refer to the paramount chief of the Chewa people and the other subordinate chief. There is only one paramount chief of the Chewa people at any given time. It is therefore very easy for anybody reading this thesis to know which paramount chief is being referred. As for the Subordinate chiefs, pseudo-

names for their titles have also been used though, again, it is common knowledge to those from the Eastern Province to know that there are three subordinate Chewa chiefs in Katete District. Explicit recognition of all research contributors in the final report is included. I effectively identified and utilized the expertise in participating communities to enhance the quality of data gathering as well as the data itself, and use caution in applying external frames of reference in its analysis and interpretation. I ensured controlled access for sensitive cultural information that has not been explicitly authorized for general distribution, as determined by members of the local community or elders in the community. Some information on girls' initiation ceremony (*Chinamwali*) is supposed to be shared exclusively among women and so is some information on the *Nyau* 'secret' school.

Areas of difficulty and challenges during the study

The interviews with the traditional chief and conducting focus group discussions with the chief's counsellors were very challenging yet highly informative. Issues of power relations needed to be taken into account all the time. For example you cannot interject the chief or an elder when they are speaking. The four chiefs visited were roughly over eighty-five kilometres apart. The roads leading to two of them were very bad. My identity as lecturer at Chipata College of Education and having taught in the same area for many years proved to be a blessing during this research. For example the four-wheel drive vehicle I used to reach the four chiefs was provided by a former pupil now a college principal. Asking questions about the *Nyau* and initiation ceremony was not an easy task as I was not initiated into it despite being a Chewa. Presenting gifts to the chiefs was also a challenge and expensive for me though expected. Some of the information provided was second hand. This brought the issues of subjectivity as disused by Silverman (2005) and Bryman (2001) on the weaknesses of qualitative research methodology in this chapter. However, the use of various research methods helped to counter-check the information gathered.

Conclusion

The qualitative approach employed in this research helped to collect data in various natural settings but with some limitation in some cases as discussed in this chapter. The frameworks used were also able to guide this study. Various research tools used supplemented one another and enhanced the validity and reliability of this work.

Although initially there was no main method but that all were to be of equal strength, the truth on the ground was that interviews proved to be more effective than the others. The next chapter presents the research findings, discussions and analysis using the thematic approach

CHAPTER SIX

PRESENTATION, ANALYSIS AND DISCUSSION OF RESEARCH FINDINGS

Introduction

This chapter is devoted to the presentation of findings collected through in-depth interviews, focus group discussions, participant observations, classroom observation, documents analysis, field notes and pupils' check list on the knowledge on AIKS in farming/gardening and their sources, whether from schools or communities. The findings from participants in this research have been put into groups one and two. Findings from respondents in group one are views, assumptions, perceptions and suggestions from traditional Chewa chiefs, headmen, women counsellors (*Alangizi/Aphungu*), initiation ceremony advisors and instructors, (*Anamkungwi*), Community midwives also known as Traditional Birth Attendants (TBA) (*Anamwino*), local business persons, local herbalists, farmers etc) drawn from Katete District, the headquarters of the Chewa people as already stated. These participants are more or less drawn from what Wenger (1998) would call the community of practice (see chapter three). Findings from participants in this group are likely to shed more light on how the perceived custodians of the Chewa AIKS value formal schooling in comparison with their AIKS.

Findings in group two are from the policy makers and implementers from the Ministry of Education, (MoE) University lecturers, curriculum developers, examiners and others identified by respondents, Community Development and Social Services as well as Science, Technology and Vocational Training as line ministries working with MoE in the provision of education. Findings from participants interviewed while in transit from one place to another e.g. in buses, planes (Opportunistic sampling) and those identified through snowball sampling have been included in either of the two groups, based on their individual profiles. This is in line with the notion that we all belong to a community of practice. According to Wenger (1998:45), community of practice may exist as a formal or an informal group. He argues that:

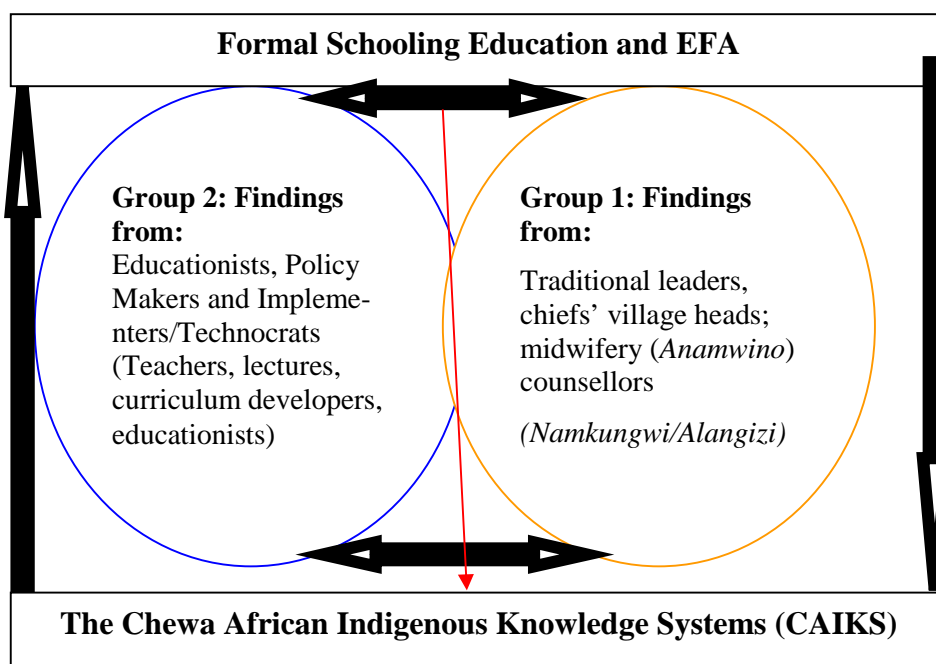
The characteristics of communities of practice vary. Some have names but many do not. Some communities of practice are quite formal in organisation while others are fluid and informal. However, members are brought together by joining in common

activities and by what they have learned through their mutual engagement in these activities (Wenger, 1998:45).

The significance of putting the participants and respondents into two groups is two fold. Firstly, it is to have a general picture of their profiles. In qualitative research the profiles of participants is important as it validates what information they bring (Miles *et al.*, 1984; Silverman, 2005). Secondly, it makes it easier to counter check where the two communities of practice- the custodians of AIKS, and policy-makers and implementers -depart or meet and the attitudes each group has for the other and for EFA. Furthermore, it shows that the research tried to seek attitudes, views, suggestions, perceptions and assumptions from both, the traditional leaders and others considered to be custodians of the AIKS, and the educationists as designers and implementers of educational policies and reforms. In addition, this grouping is also acting as a crosschecking device (Krueger *et al.*, 2000), an important ingredient in a research involving indigenous knowledge and formal education. This is in agreement with Sundar (2002) who holds that the relation between IK and formal education can be explored through the juxtaposition of the two in a given project or program.

The two groups are not in any way presented as opposing sides but two sides, which ideally are supposed to be striving together to provide quality and relevant education to all the people, old and young, a notion also supported by other authors (Dyson *et al.*, 2007). The grouping does not imply that each group must translate the other group's conceptions and perceptions or put them to test according to each other's measurements. The findings seem to suggest that their failure to complement each other may suggest presence of a thin line between them that should be identified (see figure 30). Barnhardt *et al.*, (2005) suggest that such a dividing line could be replaced by an intersection that should expand with more research in both, the IKS and the formal schooling education (see figures 10 -14). This division of respondents and participants in the study is diagrammatically presented below:

Figure 30 The division of respondents in the study



Thematic approach has been used in reporting these findings. Main and Sub themes have been generated from the data collected using various instruments (see chapter five). A number of reasons for not achieving the EFA goals were raised during the data collection. The following were not only extensively given by many respondents but were also very frequent in the responses given in the interviews and focus group discussions. Field notes and other notes from participants and classroom observations also supported these views. The group number 'one' or 'two' is stated on each quotation given to show its source. The themes and sub themes used seem to fall into the following areas:

1. Literature and respondents' perception on Zambia achieving the EFA goals by 2015.
2. The Chewa AIKS with the concept of "educating all".
3. The Chewa AIKS, with the following, in relation with formal schooling:
 - The perceived organization structures.
 - Teaching/learning methods, knowledge storage and content coverage.
 - Methods of assessment.

Aims and focuses.

1. The Chewa AIKS and perceived barriers and remedies to the EFA goals.
2. The perceived gap between school and community.
 - The perceived breakdown of the Chewa family values.

- Lack of collaboration between stakeholders from school and community.
 - Lack of community involvement in managing school discipline.
3. Attitudes toward the formal school curriculum.
 - Lack of practical and occupational skills and traditional wisdom embedded in the Chewa AIKS
 - Lack of career building.
 - Non-use of the Chewa AIKS or the LK pupils bring along to the classroom.
 - Use of textbooks perceived unrelated to pupils' world.
 - Findings from the checklist on farming/gardening skills among pupils.
 - Local perceptions on the role of formal school as ladder to economic gain.
 4. The respondents' attitudes towards the hybridization of the Chewa AIKS and the formal school curriculum.
 5. Proposed frameworks for hybridising the Chewa AIKS and the formal school curriculum.
 6. Suggested interventions for a sustainable hybridized curriculum.
 7. Other barriers to EFA.

In order to be focused in the presentation, discussion and analysis, the findings have been presented under the above main and sub themes. These themes are in line with the main and sub research questions that have guided this research. In some cases, findings cover more than one research question. Furthermore, some responses overlap the themes and have been discussed under other themes as well, though from a different perspective. (see chapters one, and five for the research questions). The importance of the practical and occupational skills and the focus on education giving jobs seem to be mentioned almost in all the themes covered.

Literature and respondents' perceptions on Zambia achieving the EFA goals by 2015

While the literature review gave a general global picture on challenges affecting the implementation of EFA, respondents in this research have cited specific ones facing the implementation of EFA in Zambia and among the Chewa people. The findings have revealed that the majority of the respondents from the two groups (see figure 30) felt that it may not be possible for Zambia to achieve any of those goals by 2015. Literature review and research findings have revealed that much of the progress recorded on the implementation of EFA in Sub Saharan Africa has been on access

rather than on the other EFA goals (Kelly, 1999; Odora; 2000; Brock- Utne, 2000; McGrath, 2008) (see chapters one and two). Many reasons cited by majority of respondents are discussed later in this chapter. One of the key findings is that the education offered lacks quality and is irrelevant to people's needs as suggested by Kelly (1999) (see chapter two). In many UNESCO annual reports, (UNESCO, 2004; 2005) quality education is defined by the pupil/teacher, pupil/books, pupil/desk and other ratios (input) and not what actually goes on in schools (output) (see Chapter two). The Ministry of Education in Zambia (MoE) follows the same approach as explained below:

Quality of education should be measured by looking at teacher /pupil ratios. That way you can check whether or not you have materials and teachers. Quality control officers at Curriculum Development Centre (CDC) look at these ratios. That is why we have improved a lot on access. We have 42, 000 Grades 1-5 out of school children in our Taonga Market learning centres and our projection is to capture 100,000 Grades 1-9 by 2009 (Malama 1/ 12/ 05. Group two).

In the quotation above, access is not only expressed as an end in itself but also as proof of offering quality education. My argument is that this discourse of quality, determined by ratios, is from a Western paradigm. To the majority of the respondents, especially the traditional chiefs and elders, the quality of education is determined by its ability to guarantee jobs to pupils after school. Serpell's (2003) research findings (see chapter three) bring out a similar point of view and highlight the frustration parents have when they see their children fail to find jobs after school. The findings have revealed that the frustration seems to worsen when these out of school youths rejoin their communities with little knowledge of farming, gardening or any other practical skill that can sustain them in the community as argued by one traditional chief:

We want all our children to go to school so that they should develop their country. They start their Grade one very well but many stop attending school mid way. But even those who go up to Grade 7 join the community unprepared for life outside school. They cannot do any work that requires practical skills like farming, gardening, bee-keeping or tailoring. They *forget all* these skills once they start school. We wonder what these children learn in these schools (Chief Kathumbawa, 30 December, 05 Group 1).

The views expressed on the rate for survival to the last grade are in corroboration with UNESCO (2007: 53) which laments that, "while policies adopted since Dakar have brought about major progress in access to schooling, school systems have not always

been able to retain the large flow of new entrants.” The findings in this section have suggested reasons why EFA seems to target more on access than quality:

Many countries have put their focus on access at the expense of quality because it is much easier to generalize quantitative indicators as reflected in access analyses. However, the right of children to quality education is the real trigger of development of any country. Quality is ignored because it pertains to development of the poor people just as quantities are given priority because they merely express survival levels of the poor (Dr Kasenda, 4, November, 05, Group 2).

My argument is that failure to measure the quality of education could be because indicators and benchmarks of what is quality education are considered to be universal when they vary from place to place. The irony is no benchmarks or indicators of quality education are explicitly mentioned in any of the six EFA goals (Figure 1). Using an illustration from the medical field one respondent, a former senior inspector of schools said:

Sending every child to school is good but if the education they receive is irrelevant to their needs and that of their society, then that education has no credibility and therefore questionable. It's like sending all the sick to hospitals where they are given wrong medication for their ailments. Improving the infrastructure and maintaining excellent doctor/patient ratios alone, may not be enough. Such patients may even have side effects or be poisoned (Mwenya Musanshi 23/02/06. Group two).

The views in the above quotation show that education without quality may also be harmful as illustrated in the opening quotation of chapter two on broad-based education as well (Khera, 2004). One conclusion we can draw from these findings is that there are contentious issues on the discourses of quality of education and that they vary with partners- parents, pupils, educational managers, UNESCO etc. To the majority of respondents in this research (parents), the quality of school education measured by its ability to reward pupils with white-collar jobs at completion. However, the findings have shown that EFA does not give jobs. The findings presented below are trying to answer the main question of this research, “Can the Chewa African Indigenous Knowledge System (Chewa AIKS) enhance the achievement of the Education for All (EFA) goals?”

The Chewa AIKS with the concept of “Educating all”

This section presents the attitudes respondents have towards the concept of “educating all.” The majority of the respondents showed that Chewa traditional leaders and elders do not know this externally constructed concept of EFA, as stipulated by the Jomtien 1990 Conference (see chapters one and two). However, inculcating knowledge to the

young has always been one of the main goals among the Chewa people. It is not only imbedded in the Chewa AIKS but also appreciated by the majority of the respondents. The findings have indicated that while EFA has 1990 as a starting point and a particular year to end (2015), the concept of educating all the young has always been an ongoing goal for the Chewa people (see chapters two and four). This view is supported by findings in a study involving three African countries, Kenya, Tanzania and Ethiopia on local people's understanding of concepts like "educating all". The study findings reported by Yamada (2007:209) concluded that:

Although the EFA goals were only brought in fifteen or so years ago, in each of the countries researched (Kenya, Tanzania, Ethiopia), the desire for, and commitment to, education has long been around. In that sense, education is locally-rooted.

The majority of respondents argued that it was inevitable for every Chewa child to acquire the Chewa AIKS (*Mwambo wa a Chewa*) and maintain it even when in formal school. However, the respondents' consensus is that both the Chewa AIKS and the formal school education are beneficial to the child, the community, and the country. The findings have shown that many parents send their children to formal schools mainly for economic gains and status in society (see taxonomy three in chapter three). The inculcation of the Chewa AIKS into the child is for character building, morals, respect for elderly ones and identity as expressed by one Chewa chief on the two forms of education:

We have education for us blacks or Africans, which follows our cultural traditions (*Mwambo*). We also have European education from schools. Both forms are important. The child must go deep (**azame**) into the education of his or her African people so that he or she knows the morals, good behaviour and some practical skills. Again, the child must obtain education from school so that he or she can know how to read and write and find a job and sustain himself or herself in life and develop the country Zambia (Chief Mbanzombe, 21 February, 06 Group 1)

The use of the term *azame* meaning 'going deep' is a reminder of the Iceberg Cultural model (Barnhardt *et al.*, 1981; 2005) that emphasises the need to go beyond the surface culture but further into the deep culture to learn more about the concrete things that depict the peoples' way of living rather than the surface culture which may just be about the folk stories and is more abstract (Antweiler, 1996). Note that the appreciation for both forms of education is with the respondents' full knowledge that the two are not the same.

The findings from this section have suggested that formal schooling education gives a child literacy skills (reading and writing) and jobs. I would argue that there is a failure to understand and appreciate that writing and reading skills are there in Chewa AIKS (Mtonga *et al.*, 2000; Mtonga, 2006) but are in the form of drawing and use of pictographic symbols which could represent specific proverbs or incidences in life as the case is in other African tribes (Kanu, (2007b). We could argue here that there is ignorance on the part of many respondents about new attitudes that the child gets from school which makes him or her look down upon farming/gardening and rural life altogether. The findings have revealed that majority of parents and children consider those who did not go to school illiterate. This implies that they consider Chewa AIKS to be limited. However, concluding that when one has not attended formal schooling education one has no literacy has been refuted by one respondent describing such a notion, a product of the western discourse. He argues as follows:

A person who can read a word but cannot read the environment cannot be deemed ignorant and illiterate. To me an illiterate person is he /she who, even with more than enough schooling cannot read his/her environment, identify the wealth it has and protect that wealth, multiply it and enhance his/her own quality of life. Hence, real illiteracy is about failure or incompetence in reading the wealth of one's environment (Dr Kasenda, 1st December, 05 Group 2).

Such views may suggest that, like EFA, the concept of illiteracy is also an externally devised one and a metaphor referred to a group of people who initially were not aware of it. This illiteracy is linked to failure to know the orthographies of one of the internationally recognized languages. This is what Brock-Utne (2007:487) refutes when she argues on the concept "bilingual teaching." She holds that in the African context, "the concept seems to be reserved for a situation where one of the languages is an ex-colonial one", and not two or more African languages. Literacy in this case seems to be confined to the ability to read and write in one of the ex-colonial masters' languages. Such a view is also refuted by Vuolab (2000: 15) who believes that when he was growing, his family, his home, and the environment around his home were his libraries where he got his literacy. He further adds:

When I was a child, story –telling was not a separate ceremony like evening stories on TV these days. Stories for me were duty, hobby and fun, explainer, teacher, company and comforter. My literacy events took place in our cowshed as we were milking cows.

Vuolab (2000) seems to agree with Rogers (2003) who also suggests that there are other forms of literacy and knowledge that must be appreciated and acknowledged.

Many respondents feel very strongly that in the Chewa AIKS (*Mwambo wa a Chewa*) the concept of “educating all” is accomplished when good manners, morals, skills, patience, tribal wisdom, endurance, pertinence and many other virtues are inculcated into every child. However, these skills seem to be incomplete. The bottom line is acquiring the kind of education that should guarantee a job for a better living. Similar views were also supported in the findings by Serpell (1993) in the studies conducted among the Chewa people on the significance of schooling, as already reported (see chapter three).

However, I would also like to argue that views in the quotation above show that the respondent may not be aware of the contradictions the child who wants to apply the knowledge acquired from the two knowledge systems may be experiencing (see ‘why the choice’ in chapter 1). However, such contradictions exist in a situation where the two forms of education operate independent of each other (see Figure 11). The argument in this research is that such contradictions may find their solutions in consultations and the sharing of knowledge from the two forms of knowledge as discussed in Sillitoe *et al.*, (2005) model of communication in indigenous research (see Figure 17). The significant point emerging from these findings is that the concept of “educating all” present among the Chewa community could form a starting point in the drive for the integration of the Chewa AIKS and the formal school curriculum. Furthermore, there were also some concerns raised by some respondents on the comprehension and interpretation of the terms “education” “schooling” and to some extent “learning/teaching”. Literature review shows that these terms are often used interchangeably among the Chewa people (see chapter two). The argument expressed by some respondents is that failure to differentiate these terms could easily make it difficult to pinpoint target groups to receive that education and could eventually make it hard to focus on specific objectives to be achieved as stated below by one respondent:

There is need to operationalize the terms, education and schooling. There are many people who take education to mean schooling or schooling to mean education. The advent of school has been linked with education, thereby worsening the situation. Nowadays, all those who have not gone to school are considered to be uneducated. Many people have this belief and have even internalised the idea that they are not educated but illiterate (Prof. Msamba chime, Group 2).

Some respondents argued that this could be a possible source of problems with the implementation of the EFA. Some field notes gathered also show that the term

'education' is commonly used to mean 'schooling' and that whoever did not go to school is not educated (see chapter two). This can be seen from the field work notes from the answers given by three respondents to the question, "Are you educated?"

Ndife osaphunzira. Tinachokera pa window (We are not educated. We came out through the window [to mean classroom window and not door. Those who come through the door completed their schooling but those through the window did not (Amelina, 3, February, 06, Group 1).

Ndine osaphunzira. Ndine wa mmudzi cabe (I am not educated but just a village person [as if to mean that all those in the village are not educated because education is in school and not in a village or community] (Manase, 3 February, 06) Group 1.

Ife Ndife osaphunzira. Nafungo la sikulu sitilidziwa (We are not educated. We do not even know the smell of school (Dolika, 3, February, 06) Group 1.

The use of the public voice "we" when referring to one's self is an irony. In the *Chichewa* language, this is used to show feelings of helplessness. The assumption given is that the respondent does not consider the informal and non-formal education that the Chewa people go through in the community or village as education at all. The findings here show that the use of the term 'education' to mean 'schooling', 'learning' and 'literacy' that only take place in a school has made many respondents consider school the only place where those activities take place (see chapter two). The findings are in corroboration with those found by Serpell (2003) (see chapter three). One Chewa chief nearly refused to be interviewed because he felt he was not 'educated enough' to talk to the researcher on the topic which to him was for the 'educated', 'learned' and 'literate'. Below is the expression the chief gave:

What do you want to ask us the uneducated ones? You who went to school are educated. You should be the one to tell us what you know and not asking us questions to answer because we do not have anything to tell you. Chief Mbanzombe, 21st, December, 2005, Group one).

The use of the plural object pronoun 'us' as used in the above quotation when referring to self is one way of belittling oneself in Chewa language. There is an element of internalizing feelings of being illiterate and powerless. This thinking seems to agree with what Van Dijk (1993:255) says about discourses:

Discourse is seen as a structured by power and dominance. Power involves control by one group over another, while dominance refers to hegemonic existence where the minds of the dominated are influenced in such a way that they accept dominance and act in the interest of the powerful out of their own free will.

Some of the views expressed by some respondents in group two also indicate some sense of reservations and anger over the misapplication of these terms. They seem to argue that when one goes to school, one is not necessarily 'educated,' (given tools, attitudes and skills that would make one live a better life in one's environment), but merely 'schooled' (Given head knowledge through academic education). I also argue that in the EFA goals, there is no mention of education for a better living, yet this is what many respondents consider as an indicator of good education (see figure 1). This is how some participants expressed their feelings:

I regret that so much money was used to school us but not to educate us (Dr Kasanda, 1st December, 05 Group 2).

I feel I have been 'miseducated' to look educated. We need education that can make one realise the potential and value of the environment to better up one's everyday life. Our pupils need to know issues involving sexual life, culture, balancing reality and sexual life. We have just been schooled and not educated (Professor Mwansa, 9 January, 06 Group 2).

The paradox in the two quotations above is that the two respondents have done well out of schooling (Drs and professors). This could raise doubts as to whether they would send their children to schools that have included AIKS in their curricula. Some studies (Banda, 2002) on the use of mother tongue for initial literacy have revealed that some of the elite, though supported the mother tongue reform, sent their children to private or international schools where English was the language of instruction.

The findings from the interviews seem to suggest the misinterpretation of the terms 'education' and 'schooling' could be the starting point of problems in the delivery of education for all. One respondent put it this way:

The failure to distinguish between schooling and education has created a scenario where the Ministries of Education in many developing countries are mere Ministries of Schools, fighting to achieve School for All (SFA) and not Education for All (EFA). This situation has resulted into little attention being given to the provision of adult, secondary and tertiary education (Prof.Mwansa (January, 06, Group 2).

The views expressed above support the notion that education is more than simply going through school. The literature review seems to support the view that failure to distinguish between these concepts has affected the implementation and consequently the achievement of the EFA in that it reduces participation as some groups of people, like the traditional leaders may feel they are not competent enough to participate or contribute anything towards the provision of schooling education.

One respondent went further as to assume that the neglecting of other sectors in education (Adult, tertiary, non-formal and informal) could be attributed to the limited parameters of the term 'education'. Like Odora (2000), he argued in the quotation below that EFA was limited to Basic education for all (BEFA):

EFA goals were centred and concentrated on Basic Education (Grades 1-9) at the expense of secondary and tertiary education. It was as if pupils would not go beyond the Basic education level. Adult education was also ignored yet very cardinal in the provision of EFA goals. The progression of pupils even within the Basic education itself was ignored, yet very important (Mr Sakazwe, 9 January, 06 Group 2).

In support of these findings, Rogers (2003) also argues that EFA is reduced to Education for All Children (EFAC) leaving out adults. The findings in this section seem to suggest that other forms of education are needed to complement the formal school education. There is a general consensus among various respondents that the Chewa AIKS and the formal school education could offer the kind of education that can be adapted to the needs of the people.

The Chewa AIKS in relation with formal schooling

The perceived organization structures

The findings from majority of the respondents seem to suggest that the Chewa AIKS has some systemic structures (mechanisms involving traditional leaders and elders); methods and techniques used to inculcate the IK into their children, particular content material to be covered ('syllabus') and the modes of assessing what has been passed on to the learners. The findings reveal that these aspects stated above could be consulted (structures), utilized in classroom teaching and learning (Methods and techniques), included in the school curriculum (content coverage) and provide another form of assessment (ways of assessing). The findings in this section have also shown that these aspects could either hinder or enhance the achievement of EFA. Summary of the key findings on how these aspects could do either of the two are presented in the table below, and explained later.

Figure 31: Summary of key findings on main aspects of the Chewa AIKS relating with formal school and EFA

THE CHEWA AIKS	Features perceived positive and could support the formal school education.	Features of Chewa AIKS perceived negative to EFA.
Systemic Structures of the Chewa AIKS	<ul style="list-style-type: none"> • Presence of a Chewa Royal Establishment with power to influence the subjects on developmental issues. • The already established structures, roles and responsibilities of the sub chiefs and elders with specialised skills. • The position of authority of the queen mother Nyangu and female chiefs as role models on gender issues. • Family as the starting point in the early childhood –education. • The important role of mother in a family. • Cost effective as every adult is a teacher with elders as “moving libraries.” • Particular places for training (<i>Mphala</i> for boys <i>Kumtondo</i> for girls) like in non-formal education • Stories, proverbs, saying of the wise, taboos and consequences as prototypes of libraries and books that store knowledge and information and also act as teaching methods. 	<ul style="list-style-type: none"> • Exclusion period coinciding with school term. • Queen mother Nyangu confined to ceremonial roles only. • All chiefs’ counsellors are men. • Uncle’s ownership and control of sister’s children. • The matrilineal society yet plenty of male dominated structures. • Not all share the same knowledge, practices and skills. • Some knowledge hidden or restricted by gender and age. • The perceived accumulated and not constructed knowledge could be out of touch with reality. • Context- based knowledge and therefore limited. • Rigid rules, like not interjecting the chief or an adult..
Methods/Techniques used in teaching and storing of knowledge	<ul style="list-style-type: none"> • The use of songs, play, riddles, proverbial wisdom, Tasks, Expeditions, observations, stories, use of all the senses, games, songs, chants, riddles, observations that would promotes the teaching of various core subjects. • Use of various methods (Eclectic) • Apprenticeships • IKS practical skills and apprenticeship could open doors of entrepreneurship and employment. 	<ul style="list-style-type: none"> • Gender-biased proverbs • Use of threats and some taboos not positive to girls’ education. • Ownership of children by uncle reduces direct parental care to support school activities on child • Boys starting school late or not at all because of herding uncle’s cattle when own children are at school.
Assessment (Summative and Formative like)	<ul style="list-style-type: none"> • Formative on every day activities, manners, obedience, patience, endurance etc. • Summative on reproduction and sexual education and specific practical skills e.g. carving or construction of structures. • No failures due to apprenticeships. 	<ul style="list-style-type: none"> • No written record for reference • No paper documentation as proof. • Some skills difficult to assess. • Indicators and benchmarks for quality education differ from each community.
Content Material Covered	<ul style="list-style-type: none"> • Wider coverage with many topics relevant to formal school core subjects e.g. counting in base five, shapes and measurements in basket. making, the <i>Nsoro</i> and <i>chiyato</i> games • Practical, occupational and life skills. • Proverbial wisdom and language games. • The scaffolding of knowledge e.g. knowledge for girls before age (<i>Buthu</i>) or age (<i>Namwali</i>), married woman (<i>Nchembele</i>). 	<ul style="list-style-type: none"> • Gender-biased proverbs, sayings of the wise. • Not shared or known by everybody. • ‘Syllabus’ for initiation ceremonies promoting early marriages/pregnancies. • Local and not universal. Knowledge, therefore context-based and limited. • Knowledge not packaged into subjects like formal schooling.

The findings in this section have revealed that the Chewa people have a sustainable AIKS. Literature review showed that the Chewa people are one of the highly

organised groups of people in Sub Saharan Africa (Banda, 2002) (see Chapter four). For example, one respondent elaborated on organisational issues of the Chewa people and explained how the Chewa AIKS could have been used in tax collecting process:

Tributes chiefs brought were redistributed to needy areas. This was like paying tax. The colonial government should have taken advantage of this existing system people had rather than imposing their own form of tax based on the money economy, the money people did not have. (Christopher Timbani, 17, November, 05 Group one).

The observation made in the quotation that the British colonial government could have been asking people to pay tax using their produce as a starting point is what Carmody (2004) assumes could have been the case with the AIKS. It could have formed a foundation for formal schooling education. That way, pupils could move from the Local Knowledge (LK) or the Indigenous Knowledge (IK), already familiar with, to the other new forms of knowledge at school. Carmody's (2004) notion, however, seems to reduce AIKS to a mere stepping stone or an ingredient to learning 'better' knowledge in formal schooling. I would rather LK or IK was treated as one component of the whole where the so-called new and old become one hybrid product. Again, these views find support in Sillitoe *et al.*'s (2005: xi) work on the importance of considering local or indigenous knowledge in developmental programs:

A growing number of governments and international development agencies are recognising that local-level knowledge [Indigenous knowledge] and organisations offer the foundation for new participatory approaches to development that are both cost-effective and sustainable, and socio-culturally sound. We find that agencies increasingly accept that the incorporation of indigenous knowledge into programs and projects will advance development agendas.

Another important factor that many respondents mentioned and corresponds with the literature review is the position and prominence of family (parents) in the provision of early childhood education. It is the starting point (see Figure 20) and continues and later joined by the community until a child qualifies for enrolment into formal school at the age of seven. The research findings seem to suggest that many families have surrendered their roles on early childhood education to schools. They think schools will do everything (see chapter one). It has been argued that in the West, schools have been asked to do what families did and some have suggested that this is in large part the cause of the decline of family sanctions in parts of Western societies (Metro, 2006). This research argues that families should play the nursery school role to their children in those seven years before they enrol for primary school. The position of early childhood education is very important as it forms a foundation for future

development and growth of a child (UNESCO, 2004). Documentary analysis revealed that parents could be involved in the learning of their children in ways such as attending some classes with their children, assisting their children with home work or giving them time to do the homework and signing in the homework book. Families can also act as the first 'research centres' for the children's work at school (MoE, 1998). Such efforts would enhance the EFA goal number one on early childhood education (see chapter three for possible roles for parents in schools).

Further findings have identified another organ within the Chewa royal establishment. This is the office of *Nyangu*, the queen mother of Kalonga Gawa Undi. She is perceived to a high position of influence within the hierarch of the Chewa Royal Establishment. Findings show that the *Nyangu* could be consulted when the paramount chief is away (Apparently it was the office of the queen mother *Nyangu* that made the arrangements for me to meet the paramount chief as the chief had briefly gone out of the station.). Some respondents argue that she would promote girls' education and women's development as a role model. Some of the assumed roles for *Nyangu* are captured in the quotation below:

Nyangu, the mother of Kalonga Gawa Undi is adored and glorified by people. She is a symbol of the power of women. If she were involved in formal schooling programs, she could have an impact on the girls' education and women development. She can influence a lot of parents to keep their girls in school. She may even influence changes on the syllabus of the girls' initiation ceremony of moving those aspects perceived to be encouraging early marriages and pregnancies among school girls. (Christopher Timbani, 17 November, 05 Group one).

The views exemplified in the quotation above, though mere wishes show that the Chewa Royal Establishment has systemic structure that could bring social transformation changes not only to the formal schooling education but also within its own ranks. Such revelations offer signs that indeed, the Chewa AIKS, like any other IKS or LK, (Warren *et al.*, 1995; Sillitoe, 1998) could reform itself. This view is supported by Pottier *et al.*, (2003) who refute deeply rooted assumptions that LK and IKS are bounded, static, consensual, non-reflective and unscientific, as discussed in the literature review.

These views corroborate with teachers' focus group discussions where some participants suggested that people within the community could be identified as 'community teachers'. These would sensitize parents to reduce house chores to allow girls to do school home work. Literature has revealed that house chore for girls such

as drawing water for domestic use; cooking and many others leave the girls with no time for school home work and that many of them are absent from school or are too tired to participate fully in class (Sinyangwe *et al.*, 1995) (see gender issues in chapter four and parents' roles in chapter three).

However, some respondents have argued that the queen mother *Nyangu* would have little influence on gender issues and girls' education because her presence does not go beyond the ceremonial role she plays during the *Kulamba* ceremony (see chapter three). Further observations made were that although the Chewa people are matrilineal (see chapter four for the contrast between matrilineal and patrilineal societies), the male dominance was always there. One interviewee traced the male dominance in the Chewa AIKS in a number of areas:

Although *Nyangu* is a very significant figure, she only plays ceremonial roles at the palace. The Chewa people still have stereotype structures with male dominance. When we say a father has no control over his child it does not mean the mother has. It is her brother who has the authority to send his nieces or nephews to school or marry them. The dowry from the niece's marriage is his while he pays for the nephew's one. When talking about encouraging parents to send their children to school, such power relations must be considered (Major Mbewe, 17 November, 05 Group one).

Some respondents have claimed that some uncles marry their nieces too early to raise some cattle paid as dowry but delay the marriages of their nephews to avoid paying the same. In such instances, we would say the Chewa AIKS could also be used as a cover for people's greediness and failures. More research is needed to establish how many early marriages among girls are linked to this practice done in the name of Chewa AIKS. Claims that traditional chiefs and leaders have no influence over their subjects have been raised elsewhere and have been refuted (see chapter one). Liebenstein's (2001) study on the role of Malawian chiefs on development also raised claims from some quarters that those chiefs²⁵ were only necessary as "ceremonial symbols of the past" and had no relevance to any developmental program. The claim was that people no longer respected them. The study finally revealed that recognition of traditional chiefs was an important tool for any development to take place in the areas they controlled. The study provided many interventions made by chiefs in the promotion of developmental agendas and programs.

²⁵ Some of the Malawian chiefs cited in this study are Chewa chiefs under the same paramount chief Kalonga Gawa Undi, but residing in Malawi (see chapter four for the Chewa chiefs in Malawi)

Though I do not intend to take sides on the conflicting views on the role of traditional chiefs and leaders like the queen mother, my argument is that her role or involvement in developmental programs needs further research followed by negotiations between many stakeholders even within the Chewa Royal Establishment itself. This is what Sillitoe (1998:228) suggests that when involving IK or perceived custodians of IK] in developmental programs “the establishment of partnership founded on dialogue and participation involving a range of stakeholders may be much needed” (see Figure 17).

The findings from the documentary analysis corroborating with those from interviews have revealed that the organisation structure of the Chewa sub chiefs would make it easier to integrate them in various school boards (see chapter four for the chiefs' title names which signify their roles and functions). Findings based on the 2006 *Kulamba* ceremony video recorded as part of data collection for this study show that the organisation spirit still exists among the Chewa chiefs even today. In this video, the Chewa sub-ordinate chiefs are seen bringing tributes to the Kalonga Gawa Undi as they used to do before the practice was interrupted by the British colonial administration (see pictures 6-7). Commenting on the various roles each subordinate chief was expected to play, one respondent said the following:

Each chief was performing duties like those of a minister in charge of a ministry. The title names of these chiefs to date signify those responsibilities. The paramount chief still refers particular cases to any of his subordinate chiefs based on the same roles and responsibilities entrusted in them (Christopher Timbani, 17 November, 05, Group one).

This packaging of responsibilities and skills and assigning them to particular chiefs, as suggested in the above quotation, seem to resemble the scaffolding of bodies of knowledge, skills and responsibilities in the formalized learning. This is what is observed by Agrawal (1995) when he says that even with definite differences between forms of knowledge such as IK and western-oriented formalized learning, they still share some similarities. The focus should be on how such similarities would make the two forms of knowledge supplement each other.

My position is that it may still be important to recognise those various roles and functions these Chewa chiefs were assigned and include them in history lessons for children. However, there is need to identify all the sights where those locally-constructed smelters (*vipala*) were located and make them protected areas. The elders with the local technology of mining and smelting should be identified and be given an

opportunity to demonstrate their skills in schools. Field notes have shown that there are still individuals within the Katete area who know the art of mining and smelting. Some respondents were suggesting that traditional chiefs should be allowed to perform their old roles. My argument is that with space of time, mass reproduction of hoes and axes may not be of great significance at a time when farming is mechanised even in the rural areas. With the mushrooming of churches and freedom of worship prevailing in the country, chief *Pemba moyo* (one who intercedes to God for life) may not play the same role as in the past. One major challenge about AIKS highlighted by Domfeh (2007) is that with so many social changes taking place, the effectiveness of AIKS is likely to be watered down. This is in line with the timely reminder from Pottier *et al.*, (2003) that the enthusiasms for local knowledge [IK] data could produce some exaggerated claims about its value. This could result into offering superficial solutions to complex problems. However, documenting findings on roles of chiefs as done by this research is important as such knowledge could be lost or forgotten if left in people's memories.

The findings have revealed some similarities among the practical and occupational skills associated with the perceived roles of the Chewa chiefs, those the majority of the respondents said should be integrated with the formal school curriculum and the ones the Ministry of Education's 'experts' (MoE, 2005) have identified as 'community studies' (MoE (see figure 26). One respondent gave economic roles that would be realized with the inclusion of Chewa AIKS in the formal school curriculum:

The Indigenous knowledge will enable pupils to produce or make things they may later sell and live on. In addition to that, pupils are also bound to improve their nutrition and acquire business skills. In other words, you see a door of entrepreneurship entering the education system at a right time, the primary school (Chilala, 5, January, 06, Group two).

Considering the knowledge the traditional chiefs and elders are perceived to have, some respondents were proposing their inclusion in various education boards. The paramount chief was able to project what chiefs would do if they were made members of education boards:

If chiefs were members of Provincial or District Education Boards, we would have an input in the identification of some aspects from the Chewa AIKS that we think should be included in the school curriculum. We would even help to identify those with particular skills in the community who could help teachers in schools. We can do this through the village heads who act as 'eyes' for the chiefs (P /Chief Chikuta, 8, November, 05 Group two).

Such findings as in the quotation above show that traditional chiefs, local leaders and elders the potential and influence among their people and could be partners in the production of a negotiated curriculum. This is supported in Barnhardt *et al.*, 's (2005) works in Alaska, where traditional leaders and elders are involved in many educational committees. Revelations from Nigeria as reported by Kolawole (2005:21) corroborate with findings expressed above:

The Institute of African Arts of the Obafemi Awolowo University is known for its approach of bringing versed custodians of traditions, who are not lettered, into the mainstream of formal education to deliver papers and even teach certain, in-depth aspects of the Yoruba traditions.

The idea of formal schooling integrating with IKS for a common goal is also supported by Sillitoe *et al.*, (2003: xi) when they say:

Local knowledge [indigenous knowledge] needs to interface with global scientific knowledge, each drawing on the other to effect sustainable adaptation to natural and socio-economic environments.

The general picture coming from these findings is that with time, effort, research, dialogue and effective communication between the Chewa AIKS and the formal schooling education could become one holistic system of education. Barnhardt *et al.*, 's (2005) hybridization model of indigenous knowledge and Western science and the systemic hybridization of AIKS and science model in Adedipe's (2004) study (see Figure 16) seem to provide basis for such a possibility. My argument is that these models should not be taken as blueprints to be followed word by word but as mere guides. Coincidentally, majority of the respondents do not seem to follow all the stages in Barnhardt *et al.*, 's (2005) journey but start from stage 4 (see figure 11). The involvement of traditional leaders in the provision of education to all is supported by the majority of respondents from both groups. This notion finds support from elsewhere. King Mswati of Swaziland urged fellow traditional leaders drawn from Southern African Development Cooperation (SADC) to value [school] education:

Communities must be encouraged to value [school] education which enables them to access their rights. Education would empower people to participate in entrepreneurship. I refuse and refute the misconception that traditional systems are primitive. I therefore, urge all traditional leaders that whilst modernising, we must not lose our cultural values. Traditional and modernity have never opposed each other but it is a question of how best we integrate these two (The Post, Wednesday, July 5 2006).

While we may agree with views in the quotation above that modernity does not mean throwing away ones' traditions,(Martinussen ,1997) (see chapter three), the paradox with the Chewa discourse is that it is the shelving away of what is deemed to be tradition which makes one look modern. Field notes have shown that in some cases pupils deliberately speak in broken Chewa language or code mix it with *Bemba*, a language widely spoken in the main cities of Zambia, in order to look modern among peers in school. However, this research holds that the integration of these forms of education may eventually lead to the appreciation of the hybrid product as in Barnhardt *et al.*, 's (2005) stage 5 model (see figure 13).

The Teaching/Learning methods, knowledge storage and content coverage

The findings in this research in corroboration with the literature review have revealed that the Chewa AIKS has a number of training activities and programs aimed at preparing the young into adult life. The focus of this education is on occupational skills, social roles and person growth. Rogers (2003) claims these are the same functions of adult education in Western societies. The findings have revealed that some early childhood education and training on practical and life skills follow well defined stages with identified instructors and venues (see chapter four). These are formalised learning as opposed to the stereotyped belief that all learning in AIKS is informal:

Some organised training takes place in designated places. The boys gather *kumphala* (gathering place for male) and the girls gather *Kumtondo* (gathering place for females). Here, elders impart knowledge, attitudes, practical, occupational and life skills to the young followed by task-based assignments (Professor Mapapa 11 January, 06, Group two).

Many respondents in this study have used same terminologies in the quotation above to describe these developmental stages. This may indicate their authenticity. However, these gathering places defined by gender could be contentious as they seem to consolidate gender disparities and social inequalities. Other contentious issues are that no assignments seem to be done jointly by the two sexes and there are possibilities that knowledge could be denied to a group on the basis of gender and age.

However, one advantage identified in these findings is that every adult is a parent, teacher, guider and counsellor. Any adult has the authority to exercise any of those roles on any child in the community. Such findings suggest that Chewa AIKS is never

short of 'teachers.' The assumption that adults are wiser and more knowledgeable is supported by the literature review (see the *Nyau* mask *Nkhalamba* (the old man) in chapter four). However, this has already been identified as contentious as all adults could be wise. The production of new *Nyau* masks with messages on current issues like HIV/ AIDS and on political issues (see chapter four) seem to suggest that both the young and the old could be involved in that knowledge construction.

Some respondents identified *Nyau*, discussed in chapter four, as a 'school' with some non formal and formalised learning which could supplement formal schooling education. One respondent initiated into *Nyau* claimed one can belong to both *Nyau* and school and that *Nyau* may even enhance schooling education:

When I enrolled into the *Nyau*, my father was worried thinking it would disturb my school. I graduated from *Nyau* and carried on with my school, but a different person in terms of discipline, respect for elders, teachers and school rules (Dr Kaphesi, 12, March, 07 Group two).

The views in the quotation above seem to picture an isolated case. Focus group discussions for teachers cited *Nyau* programs as barriers to schooling education. However, its ability to adapt to various situations, function as a teaching aid, act as a tool for political satire, promote entrepreneurship, sensitise the community on dangers of diseases and to offer tasks-based activities based on the principles of apprenticeship (see chapter four) suggest that *Nyau* could supplement schooling education in many ways. This is an area that needs further research. It is beyond the scope of this study. The findings in this section have shown that Chewa AIKS follows particular teaching methods and has its own ways of storing knowledge. The findings have revealed that proverbs, sayings of the wise, beliefs, stories, chants, riddles, dances, games, taboos and their consequences are used, both as effective teaching/learning tools, and 'libraries' for the storage of information. This is how one respondent and a teacher expressed his views:

While schools have libraries and books where they store their knowledge, we Chewa people store our knowledge and wisdom in proverbs, saying of the wise, songs, stories, dances, taboos and beliefs that are often followed by consequences that befall those who do not abide by the norms (Daniel Banda 25, December, 05 Group one).

Furthermore, the findings have also revealed that songs could also be used to teach and reinforce specific aspects in many subjects in formal schools. Some of the subjects mentioned were religious education, science, maths, social studies, languages and many others. This is also supported by findings in Malawi by Croft (2002). Her

study was on the use of traditional songs in lessons. Findings from this study revealed that songs indirectly support learning by ameliorating some of the difficulties of learning and teaching conditions. This view is also supported by Pye *et al.*, (2003) and Rogers (2003) who agree that locally based reading materials, songs and stories bring motivation to learners both young and adults.

The use of taboos, beliefs, proverbs and other sayings of the wise to reinforce teaching and learning were also supported by one of the four chiefs interviewed:

The taboos and beliefs are used to reinforce norms, values, morals, discipline and many other virtues and traditions. Fears for the consequences for failing to abide by them reinforce the beliefs. You neither question nor try them. For example, if it is said do not have sexual intercourse with a woman who has just given birth because the baby would die, of *mdulo* (pneumonia), how do you try that? You just refrain from doing that (Chief Kathumba, 30, December, 05 Group one).

My argument is that while some of the taboos could be explained using conventional science (see Tables 3-4) others cannot and a pupil who interacts with knowledge from science is bound to question the wisdom and logic behind taboos based on myths. To say that no child should question the Chewa AIKS is to deny the pupils the opportunity to construct new forms of knowledge and understanding even within the Chewa AIKS. These are some of the pedagogical issues that need consideration when talking about integrating the Chewa AIKS and formal school curriculum (see critique to IKS in chapter three). These pedagogical differences were identified as a source of worry in both forms of knowledge as cited below:

Some teaching methods used in schools are against our Chewa traditions. Grade four pupils are taught how to wear condoms to prevent HIV/AIDS. We say *choipa sachiyesa* (The wrong should never be tried). A child must know that fire burns. Telling children to use condoms is like telling a child that fire can still be touched so long you dip your fingers in water to reduce the pain (Chief Kathumba, 30 December, 05 Group one).

Some of these pedagogical implementations raise contentious questions as to whether traditional leaders would engage into debate with pupils as everything from them are 'truths' just as school knowledge is treated the same. There are also doubts whether teachers would treat those beliefs and taboo based on myths as areas that need more research and debate. However, it may help teachers if they followed the suggestion by George (1995:85) who says that:

The overall aim of the teacher [dealing with the integration of science and IK] is to expose pupils to both knowledge systems so that pupils would be better empowered to make their own decisions about how they wish to conduct their lives. Teachers will

also need to understand the world views present in the community. They should highlight the purposes served by some aspects of IKS.

More findings show that the use of proverbs is very prominent in many Chewa proceedings. Field notes taken during open court sessions at two chiefs' palaces showed that proverbs were used, either to introduce or summarize a point. This is what Mwale (1973) and Ngulube (1989) seem to share when they say that proverbs are "like capsules packed with knowledge and traditional wisdom." However, some proverbs are negative to women and girls and reinforce stereotype thinking that women are second class citizens (see gender biased proverbs in chapter three).

Despite these challenges, I agree with the majority of respondents who argued that the integration of teaching methods and content from the Chewa AIKS with the formal school curriculum would make pupils connect what they learn at school and things they experience in their communities as the community and school would become part of each other. What comes clearly in the findings is that such knowledge must be included in the examination if pupils and parents are to value it. The assumption from majority of the respondents is that the programs and methodologies used could be adapted to formal schooling education and could provide the motivation pupils require to continue with schooling.

Methods of assessment in the Chewa AIKS in relation with the formal schooling

This section presents findings on the perceptions respondents have on the methods of assessment used in the Chewa AIKS. The findings from interviews and focus group discussions have revealed that types of assessments given in the Chewa AIKS are seemingly summative and formative in nature but are all context and task-based. They seem to depend on the purpose of the knowledge, task or experiences being assessed. When asked how they knew that the boy or girl had passed the training or lessons given, one respondent said the following:

We use different techniques to assess children in Chewa AIKS. We can send them for some errands and monitor how they respond in front of elders. To test memory, we can send a child to go and fetch herbs. The child is expected to remember the name, appearance and the smell of the roots or leaves required. About raising and managing a family, we observe and question them regularly. Assessment of practical skills is task-based. Rewards could be offered to those who accomplish the tasks and those who fail are assigned to other people for help (Mr Mwale, 4 February, 06, group one).

These findings show that the Chewa AIKS employs so much of formative assessment especially on daily activities. The key point here is that there is no complete failure as one can still learn other task-based skills. The quotation above has given examples of both summative and formative kinds of assessment and some elements of apprenticeships. There is a possibility that if the Chewa AIKS were to be incorporated into the formal schooling education, there could still be ways of assessing the various skills and practical wisdom imparted into the children through the aspects from the Chewa AIKS. The suggestion to assess AIKS formatively was expressed by one respondent from the Examination Council of Zambia (ECZ):

Much of the community studies (AIKS) will be assessed formatively. This will form part of continuous assessment for the pupils. The integration of community studies with the school curriculum gives a school-based curriculum that fits the immediate environment of the child (Mr. Chilala5/01/06 Group two).

I would argue that targeting the Chewa AIKS alone for formative assessment as suggested in the quotation above and supported by the MoE manual (MoE, 2005) could easily reinforce the already negative notion that Chewa AIKS is inferior. There may be need to integrate the Chewa AIKS into the national examination framework so that it has both summative and formative types of assessment.

Documents analysis shows that South Africa has integrated the IKS with the formal education curriculum and has also included it in the National Qualification Framework. My argument is that a policy on AIKS might make it possible to acknowledge, reward, document or even share the works in IKS with among individuals and with other institutions as suggested by Kolawole (2005).

In summary, it has been observed from the literature review and the findings that the Chewa AIKS is an established form of knowledge with identifiable systemic structures, methods and techniques, the content and modes of assessment (see Figure 31). These structures can be used to bring change on the Chewa AIKS itself and on formal school curriculum if integrated with it. There are some aspects in the Chewa AIKS perceived negative and other perceived positive to the formal schooling education. For example, the findings have shown that methods and techniques used in Chewa AIKS could also be employed in the formal schooling education to link what goes on in the community and school as suggested by Warren *et al.*, (1995). These findings in this section seem to suggest that Chewa AIKS must be included in the examination regime and be assessed like any other component in the formal school

curriculum. There are other pedagogical implications that the research has identified but even these would be answered through the integration of the two forms of knowledge.

Aims and focus of the Chewa AIKS

Nilele nane nizakulela (Look after me (Child telling parent) for I will also look after you

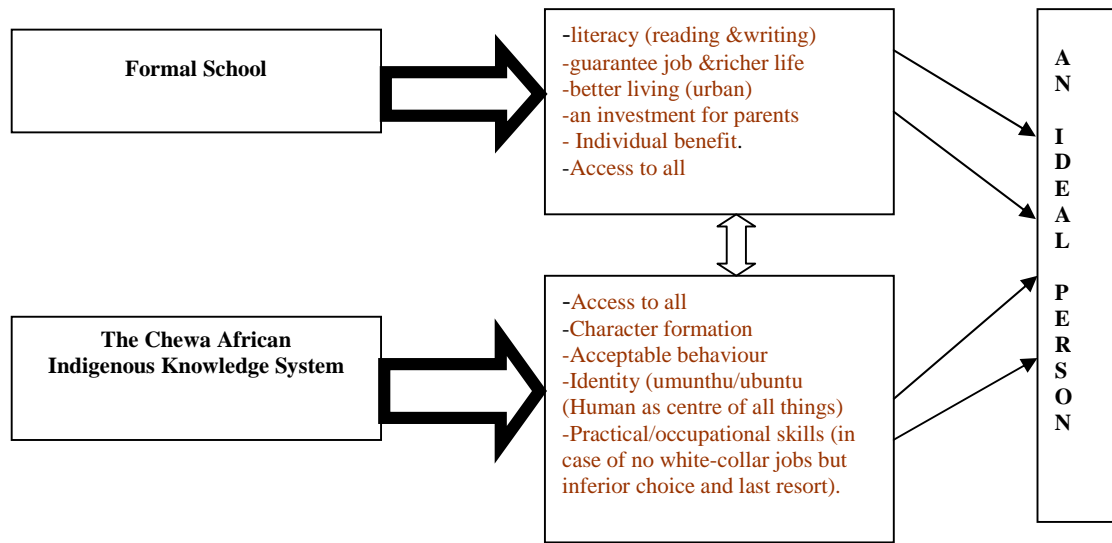
Ana ndi chuma chamtsogolo (Children are the future wealth)

Mitengo ni vitsamba (Trees are shrubs) (The growth of a nation depends on the young).

Langa mwana akali wang'ono (Train a child when still young)

The aims and focus of the Chewa AIKS have been contrasted with those for formal school. The three proverbs above commonly used by respondents on the importance of educating the young suggest that many respondents consider it as (a) an investment, (b) sign of good development and growth of a family and society (c) a tribal responsibility to bring up responsible children to maintain a good tribal image and identity. The findings have shown that it is mainly formal education that is treated as an investment because of the perceived jobs offerings. Many parents strive for their children to get it for that reason. This notion seems to endorse the assumption in the literature review that to some people the purpose of schooling education is to help them escape from their existing way of life (rural or shanty life of poverty) into what seems to be a richer one (urban). This view fits Illich's (1971) taxonomy four and five and is shared by the majority of respondents in this research (see chapter three). The findings seem to place Chewa AIKS in line with points (b) and (c) above and these fit Illich's (1971) taxonomy seven and two discussed in chapter three. Chewa AIKS alone does not offer the desirable jobs and is therefore not enough. This may explain why the majority of respondents were in favour of integrating the Chewa AIKS and the formal schooling education. The summary of the findings in Table 13 seems to suggest that such an integration would bring a combination of the taxonomy two, four, five and seven or Rogers' (2003) point 2 (see chapter three) and this is what seems to be the desirable goal by the majority of respondents from both groups as diagrammatically shown below:

Figure 32 The Perceived focus of Formal Schooling and the Chewa AIKS



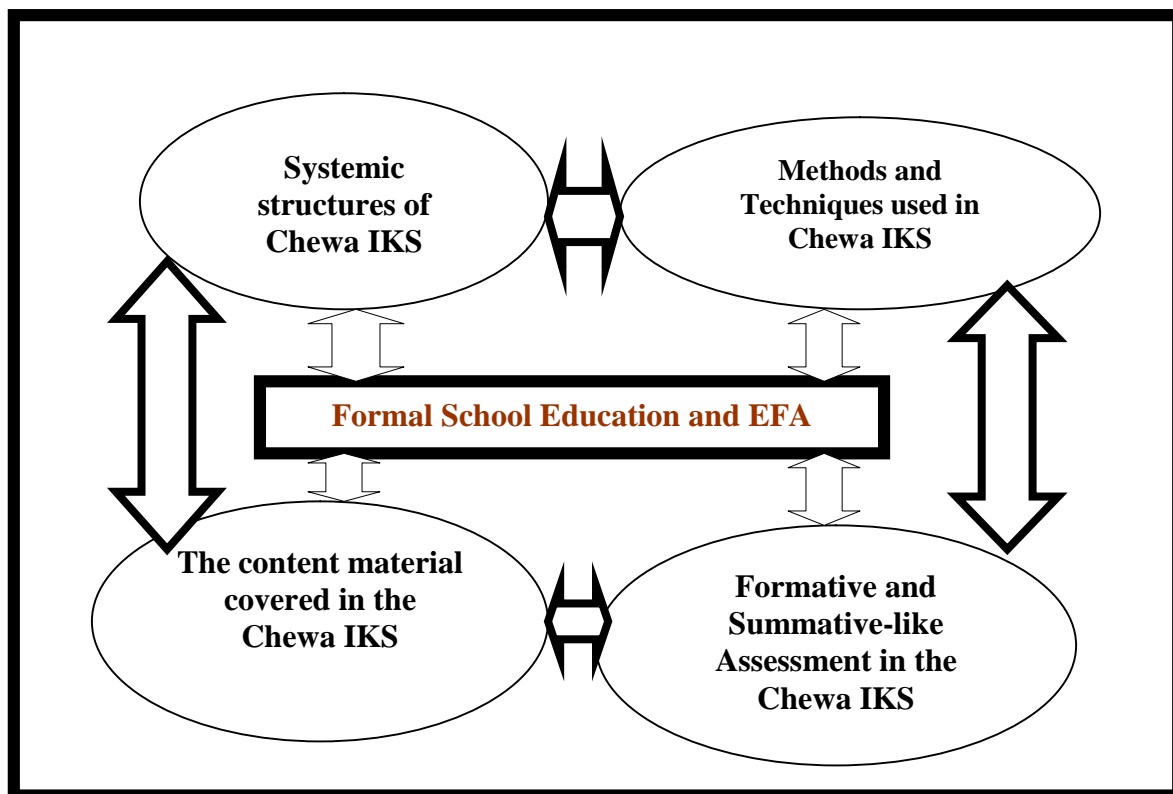
To the majority of respondents, it is the hybrid product of the two knowledge systems that could produce an ideal person in society. I would argue that the issue of an idea person is a contentious one because formal schooling develops not just head knowledge and skills as argued by some people but also attitudes-which is why so many schooled youths cannot go back to the village or engage in the much talked about practical skills like farming which they wrongly perceive are beneath their newly acquired status. This view finds support in what Gandhi in Prakash (1993:11) said,

The majority of people that sent their children to schools were agriculturists. There is no doubt that when the young men and women came back knew nothing about agriculture and were indeed contemptuous of the calling of their fathers. The higher one goes, the further one is removed from one's home environment so that at end, one's village scenes are all a sealed book to one. Pupils' civilizations are presented to them by school as imbecile, barbarous, superstitious and useless for all practical purposes.

Such views suggest that the inferior status IKS has is not hereditary but acquired and could change with time and effort. The integration of the Chewa AIKS with the formal school curriculum may make parents and pupils appreciate the reforms. The findings in this section have established the existence of some relations between the Chewa AIKS and the formal school education in areas such as organization structures, methodology and methods used the idea of assessing what has been passed on and the content to be covered. Perhaps the installing of young individuals with university education like the current paramount chief Kalonga Gawa Undi (see chapter three) and other sub ordinate chiefs with secondary school education could be an indicator of

social transformation changes within the Chewa AIKS and a way of bringing an ideal person who embraces both the formal school education and the Chewa AIKS These relations are explained diagrammatically below:

Figure 33: Perceived links between the Chewa AIKS structures and the formal schooling education



The involvement of the Chewa AIKS structures in formal schooling may help the traditional leaders monitor absenteeism and enrolment of pupils and help in changing some of the gender biased practices like early marriages and boys herding uncles’ cattle. These changes would enhance EFA goals one, three, and five. The involvement of teaching methods and use of material relevant to the lives of children could also have a positive influence on all the six EFA goals. Failure to involve these structures may perpetuate the perceived gender biased practices and hinder the achievement of girls’ education. The integration of the practical, occupational and life skills embedded in AIKS into the school curriculum may act as attractors to parents especially if they were linked to entrepreneurships and this could also have appositve impact on all the six EFA goals.

The Chewa AIKS and the Perceived barriers and remedies to EFA

This section presents findings on perceptions respondents seem to share on the Chewa AIKS, either as a barrier or remedy to the provision of the EFA goals. Literature review has revealed that there exist gaps between the formal schools and the community that have worked against the provision of EFA (see chapter two). Rather than working hand in hand to better the lives of people, the two institutions have contradicted themselves (Serpell, 1993; Kelly, 1999; Odora, 2000). A summary of key findings has been presented and later explained.

Table 7: Summary of key findings on the gap between the Chewa AIKS and the formal School Education

General Barriers to EFA	Specific areas where the gaps manifest themselves	Perceived dangers given by the majority of the respondents
<ul style="list-style-type: none"> • Gaps between school and community 	<ul style="list-style-type: none"> • Two contradictory-school and community cultures. • Lack of collaboration between: <ol style="list-style-type: none"> a) Teachers and parents b) Pupils and their parents c) Pupils and their immediate environment d) All stakeholders • Breakdown of the Chewa family values. • Lack of community involvement in school discipline and programs. • Irrelevant curriculum. • Varying and sometimes contradictory purposes for schools among various partners. • Both school and Chewa AIKS have rigid principles and treat their forms of knowledge as ‘truths’. 	<ul style="list-style-type: none"> • Child is ever negotiating between the two cultures and risks being rejected by both. • Chewa AIKS considered inferior by the elite, some teachers, pupils and parents in preference to the perceived rewarding formal school. • No agreement between teachers (the ‘educated’ and performers) and parents (the illiterate and spectators). • Some aspects from formal school harmful to Chewa AIKS. • Environmental knowledge of pupils is ignored and left out. • Loss of the Chewa culture (local and limited) in preference to the formal school one (modern and universal). • Child could be half baked in both forms of education. • Conflicting ideas may make children lose interest in both forms of education and even cause tension. • Divides community and school into the educated and uneducated. • Divorces pupils from communities they are meant to serve. • Ignored knowledge on practical, occupational and life skills acquired informally could be forgotten. • No ownership of school by the community who treat it as ‘theirs’ (teachers). • Pupils feeling shy of practices of Chewa AIKS. • Pupils treating parents and community ignorant. • Reduplication of work by various stakeholders due lack of collaboration.

The perceived gap between the formal school and the Chewa community

The findings from the interviews and focus group discussions have revealed that there seem to exist two cultures, the school culture (systems followed by school) and the

community culture (everyday lives of community members) and that the two do not seem to work together well enough. The majority of respondents from group one feel that the gap between the two institutions can be narrowed by bringing to the classroom what the Chewa community values and at the same time making the Chewa community become a learning community for pupils so that the learning that takes place in school continues when the children are in the community. One respondent and a traditional chief interviewed lamented over the perceived gap and showed that they considered it a source of worry:

Right now there is war (*Nkhondo*) between school and community. There is no agreement between a teacher and a parent. The children just copy European manners (*Zachizungu*). They are taught that everything from their parents is primitive knowledge (P/Chief Chikuti 23 November, 05 Group one).

The use of the word '*Nkhondo*' (war) in the quotation above shows that there could be some tension between the two institutions (see Table 9 and chapter one for some examples of conflicting ideas). On the other hand, the use of the expression "*zachizungu*" (Western culture) is a common Chewa expression that is used to describe anything that is not African. Field notes on some Chewa expressions have shown that the antonym to '*zachizungu*' (Western culture) is '*za chifirika*' or '*za chikuda*' which means 'African oriented', 'African culture' or 'for black people' respectively. (see chapter three in the section 'what is AIKS'). Note that the expression '*za chizungu*' is not always used negatively. It is sometimes used to show something of better quality and accepted or even admired. This is so especially when it is contrasted with the so-called 'African culture' (see 'why the choice' in Chapter one). *Zachizungu* (of Western culture) denotes some elements of goodness while *Za chifilika* (of the African nature) denotes badness or some disapproved state of affairs. Below are some of the expressions compiled:

Mankhwala ya chizungu (White or European medication, referring to hospital medication).

Mankhwala ya chifilika (African medicine, referring to herbal medication from the bush considered inferior to conventional ones in hospitals).

Mikhalidwe ya chizungu (Western way of living to mean better living).

Mikhalidwe ya chifilika or Ufilika (African way of living or African behaviour. often used to mean poor or bad behaviour or bad way of life).

Zakudya za chizungu (Western foods to mean good food).

Nzeru za chizungu (Western wisdom/intelligence often considered high quality wisdom/ intelligence).

Nzeru za chifilika (African manners often denotes bad or poor way of doing things).

My argument here is that it would be wrong to conclude that the Chewa expressions above are a sign that the Chewa people appreciate all that is associated with western culture. We cannot rule out the impact on the mind of an African of hundreds of years of colonialism where he or she was constantly reminded that white was better than black. On the other hand, the overrating of the western culture may imply reluctance by the same people to support the hybridization of what they perceive to be superior with theirs which they believe to be of low quality. These are challenges that may affect the integration of Chewa AIKS and the school curriculum.

We may also argue that expressions like those given above and these in this quotation go to show that some pupils could be influenced to consider the Chewa AIKS and some of its practices as shameful and not to be discussed at school. More findings revealed that many respondents were concerned and disturbed with the absence of relation between school and community. Describing the relationship between community and school, the paramount chiefs gave a number of issues that he perceived were not just creating the gap between school and community but were also a threat to the existence of the Chewa IKS:

Mwanijokonya kumtima (You have pricked my heart). At school, our children are taught that their parents are illiterate. All they learn is about the *Mzungu's* (white person's) clothes, songs, technology, language, food ,behaviour, geography and history but nothing about themselves, their communities, their own rivers and mountains and the history of their own great men and women. One man said the children in our schools have PhD (Permanent head Damage) (P/ chief Chikuti 23 November, 05 Group one).

The opening remark '*mwanijokonya ku mtima*', which literally means 'you have pricked my heart', is a very strong Chewa expression which is used when one is hurt and irritated. This may show the true feelings the traditional leader had over the gap between school and the community. The corrupted use of the acronym 'PhD' to mean 'Permanent Head Damage' could also be an indication that schooling education is also harmful to both the individual and to the survival of the Chewa AIKS (see Table 7). The concluding remark that we can draw from these findings is that the gap between school and community could only be narrowed by integrating the Chewa AIKS and the formal school education. The findings have revealed a number of dangers that this perceived gap brings on the achievement of EFA (see Tables 7-8).

The perceived declining of the Chewa family values and structures

The findings reveal that the perceived gap between school and the community is further widened by the assumed breakdown of family values and structures (see chapter one). The literature review has shown that family is more or less the 'pre-school' for the child among the Chewa people (see Figure 20). It is the starting point in the education of every child and that education is given for the benefit of that family and for the society that takes over from the family as the child grows (see chapter four). One traditional Chewa chief commented that because of the Chewa AIKS, their community did not know the word 'orphan'²⁶ (see the section 'why the choice' in Chapter one). One respondent and a traditional chief said the following about the Chewa family tree:

Teachers do not know that the Chewa family tree has no orphans. My brothers are 'fathers' not 'uncles' to my children and similarly sisters to my wife are 'mothers' and 'aunts' to our children. That way our children would never be orphans even if my wife and I died. The use of these general terms has made the love for the family tree cool off. We now have children registered in schoolbooks as orphans. (Chief Kathumba, 30, December, 05 Group one).

The views in the quotation above were shared by other respondents who felt the formal school education has introduced western discourses of 'family', 'uncles', 'aunts' and 'orphans'. However, there is some contradiction on child ownership. Rather than talking about the brother to his wife (uncle) looking after his children, the chief suggests his brothers. This may suggest variations in the Chewa AIKS. Furthermore, other findings have shown that the HIV/AIDS pandemic can no longer be handled by family tree structure as suggested in the quotation. There are some children in the community schools visited who are looking after their siblings because both parents died of AIDS and there is nobody in the community to look after them. In such situations the Chewa AIKS could be said to be limited (see IKS critique in chapter four).

However, we can still argue that if family values from the Chewa AIKS were maintained they would still help to maintain marriages and extended family bonds. The perception advanced here is that strong family ties would make available

²⁶ Most of the out of school youths and those in Community schools are orphans due to HIV/AIDS. The break down of the Chewa family tree has brought about children-headed families. Such children do not go to school as they become 'parents' to their siblings.

surrogate parents or guardians in the event of children losing their so-called biological parents in death. However, rather than putting the blame on the formal schooling education alone, I feel there may be need to look beyond the school borders and consider to what extent this perceived family breakdown is linked to the whole western industrial and post-industrial societies as explained by Alexander (1983) and allude to by Domfeh (2007). However, this is not the focus of this study but is an area that may require further research.

The conclusion we could make from these findings is that the break down of the Chewa family tree may also suggest reduction of family sanctions needed to guide the children in the provision of early childhood education by individual families. I would argue that the Chewa family tree should be part of the early childhood education conducted by parents and the school. The integration of Chewa AIKS with schooling education and the involvement of parents in school programs may enhance early childhood education in support of EFA (see Figure 1).

The perceived lack of collaboration among all stakeholders

The findings in this section have revealed that there is lack of collaboration among various stakeholders (see Figure 20). Traditional chiefs, elders and other local leaders were repeatedly cited by respondents that they were not involved in any planning and implementation of the school programs even in cases where the schools were within the chief's palace. The findings have shown that many people think schools are owned by teachers. The following quotations convey such thoughts:

Involving elders and experts from the communities in school programs would bridge the gap between school and the community. They would also give members of the community ownership of the school. Right now they think schools are for teachers and Ministry of Education. (Ms S Banda, 31/12, 05, Group one).

If I went to a school now, the District Education Board Secretary (DEBS) would want to find out what I am doing in **his** school. (Chief Mbanzombe, 21 November, 05 Group one).

There is need for all the stakeholders to work together. I am referring to researchers in AIKS, parents, teachers, curriculum developers, Universities, traditional leaders, elders and members of the community (Professor Msambacheme, 9 January, 06, Group two).

I agree with the views above. It has been argued by many teachers that vandalism in schools is sometimes perpetuated by members of the communities near the schools.

This could be because they do not think they own them. It has also been argued in literature review that ownership of any developmental program by the community you are trying to develop is cardinal for the success of that program (see reasons for failure of Nyerere's ESR and Kaunda's EFD in chapter two). An example of collaboration that came repeatedly in the interviews and focus group discussions was the working together of schools and the communities on the fight against HIV/ AIDS. The general view of all the four chiefs interviewed was that they should be members of the Education Boards (These boards are a tool of decentralization the government is using to involve the community in the running of schools and other institutions). Expressing his thoughts on this issue, one chief said the following:

The chiefs and their counselors must be members of the Education Boards. A good example is the involvement of traditional chiefs and local people in the prevention of HIV/AIDS. The organizers of these programs knew that they could not manage on their own. The snake cannot move without the head. The chief is the head of the people in his kingdom and should not be left out (Chief Kathumba, 30/December, 05 Group one).

The use of Chewa AIKS to fight HIV/AIDS seems to suggest that Chewa AIKS could be used for many things by various partners. Though this was not the focus of this research, this revelation opens the door for further research on how the Chewa or indeed any other AIKS could be hybridized with the school programs and other programs to enhance development. These findings show that traditional chiefs and other local leaders could influence positive changes in developmental programs such as EFA. One respondent and a chief narrated how he stopped a marriage involving a fifteen-years old school girl organised by a named church and sent the girl back into school:

I rescued a 15-year-old girl who was given in marriage by one (named) church. I stopped this marriage as chief. This never used to happen in the Chewa IKS. People would marry at 22 to 30 years olds (Chief Mbanzombe 21 November, 05 Group one)

The four chiefs interviewed mentioned a number of interventions they would implement if involved in the operations of Education Boards. They said they would make pregnant girls go back to school after delivery to support the government policy, reprimand parents who do not send their children to school and take count of children not in school and summon their parents and the village heads. Such findings have shown that the integration of the Chewa AIKS with the formal schooling education could enhance EFA (see Figure 1).

The focus group discussion by the chief Kawaza's counsellors also revealed that a by-law forbidding children of school-going age to herd cattle was in place. The findings from focus group discussions with teachers revealed that in the areas of the four Chewa chiefs visited, many children start school late because of herding their uncle's cattle (see the role of uncles in a matrilineal society discussed in chapter four) or doing it for payment of a cow after four or more years. This is how one counsellor puts it:

We have also observed that some children stop or start school late or do not even go to school at all because they herd cattle. We have resolved here that whoever sends his child to herd cattle will be punished together with the owner of the cattle. Both of them will have a case to answer. The paramount chief is in full support of this measure (Mr. Sikeva, F.G.D at chief Kawaza's palace 03 February, and 06 Group one).

Such steps taken by the traditional leaders do not only show support for formal schooling but also indicate the ability by the Chewa AIKS to reform itself in support of other forms of education. The findings from interviews with teachers show that these measures are not known to the educational authorities because of the already discussed gap that exists between the school and the community. One respondent and a teacher himself gave the following self critique on this issue:

There is no agreement between teachers and community members or parents. The main culprits here are we the teachers. We think parents and members of the community are not professionals to give us sound advice on anything (Daniela Banda 25, December, 05 Group one).

Such findings find support in Semali's (1999:307) claims that pupils' failure to transfer their indigenous knowledge to the classroom is because of teachers' attitudes towards IKS:

The transfer of indigenous knowledge from the learners' everyday life to school work is not always valued or encouraged by some teachers. These teachers simply find indigenous knowledge unimportant. They often harbour an intellectual authority that invalidates the indigenous knowledge that the young learners bring to the classroom. The mismatch that young learners face in the classroom in African schools has not changed much.

We can also argue that to assume that all teachers can make use of this assumed transferred IK would be over simplifying the IK itself as something that is already packaged and can just be 'transferred' into conventional classrooms. This is also supported by Steinlin (2007) and Cavallo (2000) who hold that IKS is not mere set of rules ready for extraction and be transferred into classrooms. It is people's way of life

and hence the need to contextualize social, cultural, cognitive and pedagogical aspects involved as suggested by Kinuthia in Dyson *et al.*, (2007). Despite these observations, the findings have still shown that the involvement of elders in the formal schooling education would bring a lot of positive changes beneficial to the pupils and the community. One respondent and a traditional birth attendant (TBA) (*Namwino*) in the village explained the predicaments she encounters when assisting young pregnant school girls during delivery. She argues that:

Most of these schoolgirls who become pregnant are underage and face problems during delivery. They have complications. Luckily, we discover in advance by looking at the shape of the stomach itself. We give them herbs so that the baby shifts to the right position before birth. Otherwise, many of these young girls would be dying in labor (*Namwino Tisankhe, Tembo, 01 January, 06 Group one*).

My argument is that if we were to evaluate the duties performed by this village TBA, they include giving care before child delivery (prenatal care), during labor and after child birth (postnatal care). We could say the TBA has used Chewa AIKS to function as a nurse, an obstetrician, a gynecologist and pediatrician. They can also sensitize the community on various dangers of child pregnancies and early marriages involving school girls and boys. Until recently, schoolgirls found pregnant would be expelled from school. If a school boy was responsible for that pregnancy, he would equally be expelled from school (Kelly, 1994). Statistics of how many girls and boys are involved each year were not obtained as this was not the main focus of the study. The idea was to highlight that such a problem does exist and TBAs use Chewa AIKS to solve such problems.

The involvement of elders in formal school programs finds support elsewhere. At Aang Serian, (House of Peace) Community College in Arusha, Tanzania, young adults between the ages of 16 and 35 are offered low-cost post-primary education. The college is a unique one because it aims at achieving an appropriate balance between 'indigenous' and 'Western' knowledge, skills and teaching methods. Describing the requirements of the course at this college Burford *et al.*, (2003: on line) say:

Each student is to complete at least three out of five selected practical tasks-medical plant identification, construction of a material object relevant to his/her ethnic group, performance of a traditional song, performance of a dance and/or drum routine, and preparation of a local dish- and explain their cultural significance. These tasks must be carried out to the satisfaction of both an Aang Serian faculty member and a community elder. In addition to their role in teaching, community elders are also included in the assessment process. Before students can be awarded a certificate, they

must be interviewed by at least by one elder of their ethnic group who must be satisfied with their knowledge and understanding.

What is not clear from these findings in the quotation above is the value attached to the qualification obtained. As long as such courses do not have an economic value, they may still be considered inferior and not appreciated by parents and pupils.

Some findings from the interviews have shown that such attempts of involving community elders and traditional leaders would not bring any improvement at all. The argument advanced by one respondent, when asked whether creating a 'pool' of elders in the community who would help to bring out the Chewa AIKS among pupils in schools is captured in the following quotation:

No organization is qualified enough to include the traditional leaders into the running of schools from curriculum development to implementation. But even if this would happen, it would just end at the level of cultural conservation of poverty and under development. I think using traditional elders to promote AIKS in schools is unnecessary because it is the same elders who have resisted change and worked to stay underdeveloped. What we need is fundamental change of the culture (Dr Kasenda, 4 November, 05, Group two).

The respondent further identified what he perceived as rigidity among the traditional leaders. He felt rigidity on the part of traditional leaders had been the main problem to any education reform or to any developmental program. The respondent did not just give this view orally but took the trouble to write his thoughts on an interview guide I was using. The quotation reflects the actual text written down by the respondent.

It is fancy how people (today) are encouraging Africans to look back and not forward to develop. The latter are known to embody a mentality in which the past feeds into the present for survival only and merely to compensate for the future but never to invent it! Africa has been too non-aligned, oscillating between indigenous and modern knowledge and refusing to make a development decision and hence the confusion in the mind, in the heart and at the level of action! Talking about AIKS now is like taking Africa back where Europe was 1800 years ago (Dr Kasenda, 4 November, 05, Group two).

Another respondent and a senior officer at the Curriculum Development Centre (CDC) was in support of the views expressed above and argued further against the idea of integrating Chewa AIKS with the school curriculum to enhance the achievement of EFA:

I do not think we need Chewa AIKS to achieve any of the EFA goals. All we need as a ministry are hard working and adequate funding. Yes, we can get some knowledge from the community, say on soil conservation and farming techniques but we can not go beyond that and bring the local people to schools (Ms Ruth Lungo 30th November, 05 Group two).

I tend to differ with the views expressed in the two quotations above. I would argue that this research has revealed a number of ways in which the Chewa AIKS seems to be utilized. This is also supported by literature review. The majority of the respondents in this research do not agree with views expressed in the quotations above either. Below are some of the responses as reactions to the belief that referring to Chewa AIKS was a retrogressive idea:

If Europe was able to move to where it is now from some point and we were to start from that point and move to a right direction, I would rather we went back then and started from there (Mr. Chilala, 5th January, 06. Group two).

I think going back to AIKS with a hope to learn or borrow one thing or so is not bad at all. It's like you are on a motor way. If you realize that you are going in a wrong direction you do not drive on but make a u-turn so that you start from where you missed the road (James Mwansa (former inspector of schools) 26 February, 06 Group one).

The use of clear analogies in the above two quotations could be an indication that the respondents were very clear and sure of what they were talking about. However, the first respondent quoted above (Dr Kasenda) was the longest serving top government official in the Ministry of Education responsible for education reform and policy changes. The second one (Mrs. Lungo) is a senior curriculum specialist in charge of curriculum design and implementation (see Appendix A). My observation is that when such key figures in-charge of educational matters and policy changes have such low opinions over reforms that involve indigenizing the perceived western oriented school curriculum, then we may understand why effort to localize the formal school curricula have not materialized despite so much writing and debates on the subject. Semali (1999:312) provides possible reasons why some respondents take such strong stands against the integration of IKS and formal school curriculum:

Many curriculum planners have been educated in European and North American universities and have adopted Western paradigms in African schools with little or no local adaptation. Some of them are also a generation or two removed from African traditional practice.

While I may agree with the views in the above quotation, there is also need to realize and acknowledge that there are also a number of writers and researchers from Western and North American universities (Warren *et al.*, 1996; Brock-Utne, 2000; Sillitoe *et al.*, 2005; Barnhardt, *et al.*, 2005) who have taken a balanced view based on research findings on the need for the IKS and Western knowledge to integrate. This research

has collected a lot of positive views on AIKS from researchers from the western world (Sillitoe, 2005; Warren *et al.*, 1995; Broke-Utne, 2000; Barnhardt *et al.*, 2005).

Collaboration among all stakeholders has been identified in this research as one of the key factors in research that looks at integrating indigenous knowledge with the western science (Sillitoe *et al.*, 2005). Findings in this study have identified conflicting views about the existence of collaboration among various ministries and departments and organizations involved in the provision of education to all. The Ministry of Education (MoE) officials interviewed, for example, claimed there was adequate collaboration between the ministry and its wings such as the Curriculum Development Centre (CDC), and the Examination Council of Zambia (ECZ). Findings also showed some collaboration between the MoE and other departments from other ministries involved in the provision of education and vocational training skills and Non-Formal Education (NFE). These are Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) and the Department of Community Development (DCD) respectively. The nature of collaboration is explained by one MOE officer involved with distance learning:

There is some co-ordination between MOE and other departments such as the Curriculum Development Centre (CDC) and Examination Council of Zambia (ECZ). We also co-ordinate with other line ministries such as Community Development, Youth and Child Development Ministry in the provision of Non Formal Education and literacy programs to out of school youths and adults (Mr Malama 1st December, 05 Group two).

While some efforts in co-ordinating some activities between the MOE and other ministries and departments could be observed, there was little or none at all between the MOE and the Non-governmental Organizations (NGOs) involved with the provision of education. This is how one respondent and a coordinator of an education programs in one NGO said:

We are working with the schools on a program called "School Improvement Plan. This program looks at school governance, accountability and effectiveness. We coordinate very well with the local people but not with the curriculum developers yet much of what we do in schools involves curricula. There is lack of effective consultation among all the stakeholders (Plan International, Chitamba, February, 06, Group two).

These findings contradict with what the education officers said above. The absence of collaboration is supported by findings from the focus group discussion at Mphangwe Basic School where the teachers said they were not able to find members in the

community with knowledge of practical and occupational skills to be involved in the school programs and suggested the involvement of traditional chiefs in the identification of individuals with these skills and special knowledge. Such views seem to suggest that in the Chewa AIKS, there are some special skills that are owned and controlled by some members of the community. This may explain why apprenticeship seems to be the main mode of teaching and training in Chewa AIKS.

In conclusion we would say that findings have exposed lack of collaboration within and among various ministries dealing with the provision of education. There may be need to improve in this area as suggested by Sillitoe *et al.*, (2005) in their communication model (see chapter three). The need for a comprehensible collaboration and dialogue among various stakeholders echoed through out these findings seems to be in line with what the UNESCO Director-General said when he praised the approval of the United Nations Declaration on the Rights of Indigenous Peoples. He hoped that the Declaration would provide:

a platform for genuine dialogue between indigenous and non-indigenous partners, creating a better understanding of indigenous worldviews and cultures which, in order to flourish, must be expressed and shared through intercultural dialogue between generations, cultures and civilizations, as well as between indigenous peoples, societies and States at large. The principles of cultural diversity and intercultural dialogue are the main guarantees of a common sustainable future (UNESCO, 2007: On line).

We can argue here that this approval seems to be in line with the scope of this research, which has brought to light various views from some perceived custodians of the Chewa AIKS. However, in the absence of a frame work and policy document to support the documentation of the Chewa AIKS; the mechanisms of rewarding individuals with the knowledge and the sharing of that knowledge with other organizations, little may take place.

Perceived lack of community involvement in managing school discipline

Lack of community involvement in matters related to discipline in schools has also been identified as one of the reasons the gap between school and community widens. Some respondents argued that pupils who make various disciplinary cases while at school and are punished should also get some form of punishment from the community as well. Some respondents argued that the school should acknowledge and consider disciplinary measures from the community as alternative forms of discipline.

Findings suggest that in cases where the offending pupils were suspended from school, they should be back into school after the community has done its part. The findings revealed that currently, members of the Chewa community were mere spectators in this area. Even where they implemented some measures of discipline on the offending child, the school did not take any notice of that. The following quotation seems to capture this view:

Some pupils are suspended or expelled from school for being indisciplined. Parents and the general community do not consider that as their problem. However, even if they did and disciplined the child at home, the school authorities would not recognize that because they think disciplinary measures are only those done in school following general orders from the ministry. (Major. Mbewe, 28, November 05 Group one).

Such findings tend to support the view that the formal school system is very rigid. Further findings have refuted the notion that some members of the Chewa community did not even bother about issues bordering on indiscipline in the schools as they have come to believe that teachers are the right people to make decisions on their children. The findings based on some field notes suggest that there are still some parents who punish their children at home when they learn that they were punished at school. One parent talked to had this to say:

In the past, if a child was punished at school, we would also give an additional punishment as parents. Teachers are like parents to these children. We wanted the child to know that we did not tolerate bad behaviour whether at school or at home (Mwada, 31/December, 05 Group one).

A similar view was expressed in other focus group discussions. The use of 'past tense' in the quotations about parents' involvement in school discipline may suggest that parents have now given up because their measures are not supported by the school system. My argument is that the double punishment may have been there because of the absence of co-ordination between teachers and parents on the issue. The findings seem to suggest that dialogue and consultation between parents and teachers could make them come up with a dual or hybridised system of disciplining children either at school, home or from both. Rather than asking offenders in school to dig pits that they later bury, they could be asked to dig rubbish pits in their communities. The involvement of all the stakeholders (see figure 20) in the provision of education for all is what Sillitoe *et al.*, (2005) emphasize. The conclusion that could be drawn from these findings is that employing family sanctions in school discipline may prove to be an effective inclusive approach of reinforcing school discipline.

Attitudes and perceptions towards the formal Primary school curriculum

The literature review has shown that the nature of the curriculum being followed affects the implementation of EFA (Odora, 1994; 2000; Brock- Utne, 2000). The findings support this notion and give specific aspects and practices in the curriculum that seem to hinder the provision of quality education to all. These findings also corroborate with Semali (1999:312) who calls most curricula followed by African countries ‘assimilationist model (see chapter three).

There is a consensus between what the literature review says and the findings of this study on school curriculum as one of the areas that require agent reforms if the provision of education to all was to be achieved. These findings have been put in a table form and later explained. This approach provides an opportunity for one to take a glance at the table and have a general picture of what is discussed in details later.

Table 8: Summary of key findings of barriers to the provision of Education for All related to curriculum

General Barriers to EFA From the Literature Review	Specific Barriers from the Research Findings	Perceived Dangers
<ul style="list-style-type: none"> • Perceived irrelevance of the Curriculum to people’s needs. • Absence of practical /occupational skills. • Absence of vocational subjects that can lead to career building. • An academic and examination oriented curriculum. • Pyramidal structure that throws away children out of school. • Absence of community involvement in the discipline in schools. • Non-use of the Chewa AIKS pupils bring along to the classroom. • Absence of farming and gardening activities in school which are backbone of community. • Absence of Chewa AIKS in text books • Unfulfilled expectations of economic prosperity. 	<ul style="list-style-type: none"> • Curriculum does not address the needs of the people • Curriculum divorces the Chewa child from his/her community • More drills for exams than teaching. • Head knowledge and not performance based curriculum • Curriculum that prepares pupils as if they will live their lives in schools. • Traditional leaders (Chiefs) not involved in planning and the execution of those plans in schools as stakeholders (See conceptual framework in chapter five). • EFA does not give jobs. • Content and not outcome based curriculum. • Curriculum ignores Chewa AIKS. • Less emphasis on practical/ vocational subjects that can promote entrepreneurship through apprenticeships. • Non use of the readily available Chewa AIKS pupils bring along to the classroom • Content material out of pupils’ context. • -Economic role given to school unrealistic. • Pyramidal structure not compatible to EFA. • Emphasis on access alone and leaves progression, achievement and completion rates to chance. 	<ul style="list-style-type: none"> • Community losing confidence and trust in the whole education system and consider sending children to school a waste of time and resources • Community feel betrayed and cheated by the school education that cannot guarantee white-collar jobs to the graduates • Schools give head knowledge to pass an examination and not skills for a better living in a community. • Pupils do not know why they are in school other than pleasing their parents • Pupils leave school with no career • The school graduates are lost once in the community. • Unemployment and the community labelling schools as ‘traps’ for the unsuspected youths. • Schooling education producing ‘illiterate graduates and street kids. • Promoting promiscuity through sexual education (Use of condoms) to children • Rewards only the few who reach the top and condemns the rest who are labelled as failures in life. • Each stage is a prerequisite to another stage and never an end on it self. Those who do not go to the next stage are failures and doomed in life. • Negative attitudes towards AIKS. • Drop or push outs are unprepared for life in community. They become wrong models.

The majority of respondents have observed that the current formal school curriculum ‘is perceived by the majority of the respondents to be irrelevant to the needs of the

people of Zambia and to the Chewa people, in particular. The findings have revealed that many parents have lost confidence in the formal schooling education because they feel it divorces pupils from the very community they are supposed to serve. It does not help the pupils, as Rogers (2003:2) puts it, "change the society in which they find themselves and make themselves happy where they are." The findings have also shown that the formal school curriculum being followed in Zambia is too academic to address the needs of her people. This is strongly supported by literature review (Kelly, 1999; Serpell, 1993) (see chapter three). The following quotation from the senior education officer captures this feeling:

We made a mistake in our education system by following an academic and examination-oriented curriculum inherited from the colonial government. This curriculum leaves out all practical skills that socially, economically, culturally, and ecologically make sense to our people and to the country at large. (Ms Zulu 08 February, 06 Group two).

Currently, these practical skills are not viewed as stated in the quotation above because they offer less desired blue-collar jobs as discussed in this chapter.

Field notes also revealed that parents expected the formal school curriculum to produce pupils who should 'know the hoe' (*Kudziwa Khasu*) meaning having farming skills. The findings have also outlined various activities that would take place if the Chewa AIKS was integrated with the formal school curriculum:

The majority of our pupils just end up with primary school education. Meanwhile, the curriculum is full of things that do not make these pupils become functional once in the community. Incorporating AIKS aspects into the school curriculum such as craft, local food preparation and preservation, preparation of local drinks like munkhoyo, production of carvings using local soft wood, necklaces making from wild seeds and many more is the answer to our education system (Prof Msambachime, 11, January 06, Group two).

The findings have also cited examples of how various individuals are making use of the Chewa AIKS. One respondent gave an account of how she was earning her living out of making traditional necklaces, bracelets and other ornaments using local wild seeds. At the time of the interview, she had extended her search for a variety of wild seeds to neighbouring countries like Swaziland. She claimed the quality of her products had improved thereby improving her business as well. When asked where she learnt those skills and how she stated her business using what the environment would provide, this is what she said:

I learnt the skill of making necklaces and other things from my grandparents. I started making these necklaces, bracelets and other ornaments using beads. Later, I started using wild seeds like *mono* which are plentiful in the bush. Now I use colourful ones from Swaziland. I buy them cheaply from local women who collect them from the forest. The women also earn their living that way (Mrs Sikapizye, 8th February, 06, Group one).

When asked if she would teach primary schools pupils her skills on an apprenticeship arrangement, she said:

I have taught many people already how to make these items. For example, I have been training this girl you see here (Pointing at a 15 year old school girl). I work with her outside her school time. I can go to any primary school and teach them but schools should be ready to pay me for my skill and time. If teachers get paid why shouldn't I? Even my husband can also teach the art of carvings at school if asked. (Mrs Sikapizye, 8th February, 06, Group one).

The making of these items from beads, local seeds and later imported ones shows that knowledge is not static and borrows from other forms of knowledge and culture as discussed in the literature review. The need to acknowledge and reward people with a skill, as stated in the quotation above, is what this research is trying to argue and support as already explained in this chapter (see Figure 35). The views expressed in the above quotations on the need to involve traditional and local leaders, craftsmen and women in the development and implementation of formal school curricula is supported by findings from various studies (Warren *et al.*, 1980; 1995). Making a conclusion on these studies, Semali (1999:308) argues that:

Local people do know a great deal about their environment, in which they have often lived for generations; and this knowledge must be taken into account in the planning and implementation of educational as well as developmental policies.

Many respondents have claimed that the involvement of the traditional and local leaders in negotiating a formal school curriculum together with other stakeholders (see Figure 21) would be one way of providing relevant education suiting the needs of the people.

The majority of the respondents put the blame on the policy implementers and curriculum developers for not taking bold decisions to implement pragmatic reforms that would include AIKS into the formal school curricula. However, we need to bear in mind the power relations involving knowledge production. Reforms of this nature require more than the good will of curriculum developers but all stakeholders in the provision of education to all. This is in line with what Pottier *et al.*, (2003:2) warn:

The production of knowledge, in both development and non-development contexts, is acutely political, because what is excluded and who is qualified to know involved acts of power. Knowledge production is embedded in social and cultural processes imbued with aspects of power, authority and legitimating, the act of producing knowledge involves social struggle, conflict and negotiation.

Findings from other studies conducted in Tanzania seem to agree with the views expressed above on how these power relations in curriculum development leave out some sections of the society. For example informal interviews with teachers in Tanzania, in Semali (1999:314) study, give the following supporting evidence on what goes on in curricula development in many parts of Africa:

Current curriculum planning rarely offers the opportunity to parents, communities or local elders to participate in the design of curricula or educational policy. This exercise continues to be left to curriculum experts who are alienated from their own culture. Too often parents and the community are seldom heard because of the documentary bias of the written word -which exists at all the key stages of development planning, implementation and evaluation.

The views expressed above agree with the general picture we can draw from the findings of this research that a curriculum must be negotiated by all stakeholders and never to be left in the hands of few 'experts'(see critique to the pilot program on 'community studies' in chapter three).

The perceived lack of practical skills in the primary school curriculum

The majority of the respondents feel that if the Chewa AIKS were included in the formal school curriculum, the practical skills, (see figure 27) embedded in it, would eventually lead to the introduction of money generating ventures like selling locally brewed drinks called *munkhoyo*, improved farming and gardening skills, tree planting and other small-scale business ventures in the school. The findings have suggested that these income generating ventures would enable pupils and the community meet their social, economical, cultural, spiritual and ecological needs. The quotations below highlight the perceived problem that have rendered the formal schooling irrelevant long after the perceived death of Education for Adaptation (Phelps-Stokes, 1922), ESR (Nyerere, 1968) and Kaunda's EFD (Kaunda, 1972).

Our school curriculum does not suit our environment. We now have young men and women who have finished their schooling education yet they do not know what to do with their good certificates. This has made some parents lose trust in the whole education system and feel betrayed by it (Ms Zulu, 08/February, 06 Groups two).

We must realize that Zambia is a developing country under construction in everything. Our schools should not just focus on academic subjects but also practical

and vocational subjects that impart skills essential for the country's development. Practical subjects have a wider range of talents that boys and girls can depend on for a living after school (Mtololo, 07 February, 06 Group two).

Kings' (2000) and Lauglo *et al.*, 's (2005) views that practical subjects have economic and personal development goals seem to agree with the views in the second quotation above. My argument is that practical and vocational subjects seem to be suggested only in the absence of the much desired and respected white-collar jobs that academic subjects seem to offer. It has also been argued (Lauglo *et al.*, 2005) that when practical and vocational subject options run parallel to academic ones, the children of the elite go for the latter while those from the disadvantaged background go for the former. The practical and vocational subjects are also said to gravitate towards boys thereby creating gender inequality. However, I tend to differ here because these subjects would bring a diversified curriculum that should offer a wider range of skills to cater for boys and girls contrarily to the fears stated above. Despite the constraint stated above, the findings of this research suggest that practical and vocational subjects can still be more than attractive enough to stimulate interests among many pupils and can prepare pupils for the world of work. These views find support in what King *et al.*, (2000: 5) say based on research findings in Ghana that:

Vocational (practical and occupational) subjects can play a part in developing mental readiness among school pupils to make a living by entrepreneurship and preference for working in the private sector and self-employment.

Some views expressed by some respondents are looking at the long term effects of the curriculum. They hold that vocational and occupational subjects have not only economic goals but also goals for personal development. The assumption is that one could still use the practical skills learnt for private life such as fixing things around the house. This may explain why the Ministry of Education is taking measures of localizing the curriculum seriously as stated below:

As a ministry we need to introduce an outcome and not a content-based curriculum. We want to introduce a curriculum that is able to link the schools and the communities where the pupils come from (Mr Nkole 30 November, 05, Group two).

Other practical and occupational skills identified by the majority of respondents and parents in both interviews and focus group discussions were traditional food processing and preservation methods, handcraft, carpentry, curving handles for axes and hoes, tailoring, welding, horticulture, farming and gardening skills, fishing ,basket-making and many others. The practical skills seem to cover a very wide

spectrum of activities which would fit both in rural and urban setting. I would argue that even if the skills may appear to benefit the rural children more than the urban ones, we need to know that there is more illiteracy and out of school children in rural than in urban areas of Zambia (Kelly, 1999). This is in line with what Seepe (2000: 134) advises could help an African child:

The challenge is to locate and identify the scientific, [practical] skills, knowledge and process embedded in the cultural practices of the African majority [AIKS] and use them to restructure, redesign and reformulate the present curriculum. A restructured curriculum should assist in the affirmation of the African child.

Documentary analysis supports these views as explained below:

There have been changes in the education system. One of the changes has been the introduction of Community Studies. This learning area aims at imparting knowledge, skills, positive attitudes and values to the learners within a locality for individual and community sustainable development (MoE, 2005: ii).

The idea of imparting these skills from the Chewa AIKS to the learners, as stated in the quotation above has already been refuted as misleading since children already have a wide range of these skills acquired informally (Rogers, 2003) but may not be aware or merely forgot them due to lack of practice. The paradox noticed through field notes and document analysis is that these same skills are not valued by the majority of parents and pupils. The findings have revealed that in some traditional songs, jobs associated with these practical skills are referred to as *nchito za ulebala* meaning 'jobs for laborers' or jobs for 'the uneducated' as opposed to *nchito za mu offesi* (Office work referring to the much preferred white-collar jobs). Such attitudes are related to some of the reasons that led to the failure of Nyerere's (1968) Education for self-reliance (ESR) (Semali, 1999) and Kaunda's Education for Development (EFD) with its focus on education with production (Bourdillon, 1980). Despite the constraints surrounding practical skills, what seems to be the conclusion from the findings in this area is that pupils and parents are optimistic about practical, vocational or occupational skills and as Lauglo *et al.*, (2005: 5) put it, "They [Parents and children] perceive them as something to 'fall back on' in order to make a living in the absence of white-collar jobs." The conclusion we can draw from these findings is that if these subjects were offered in schools, parents and pupils may see the need for EFA.

The perceived lack of career building in the primary school curriculum

The findings have shown that lack of career building in schools is also perceived as proof of the curriculum not addressing the needs of the people. The majority of the respondents in this study seem to have assigned formal schooling education with an economic role to play. The absence of career building then seems to be related to this economic role given to school. For the sake of clarity, the economic role is discussed later in this chapter. The findings from the interviews show that the absence of career building starting from primary school level has created a scenario where pupils start school and continue schooling even for some years without any idea why they are in school and what they would like to become. All they know is that their parents sent them there. This is how some respondents reported it:

Many pupils do not know why they are in schools. When you ask them why they are in school, they say because their parents want them to be at school. They think they go to school to please their parents. That explains why there is so much indiscipline in these schools (Major Mbewe, 28 November, 05 Group one).

Our education system does not include proper career guidance through the subjects one takes at school. You reach your Grade 12 without any idea what you will do after school. The examination results you get decide your entire future. A pupil must identify a skill or trade and start working towards that right from primary school. (Mtolo, 7 February, 06, Group one).

Majority of respondents agreed with the view in the quotation above that it is only after finishing their Grade 12 that pupils start looking for a career. Often this is determined by what their certificates obtained through the examinations can allow them to do and not by their interest or the needs of their communities (see chapter two). The contention given by teachers is that with no jobs around, what career would a pupil think of? However, this seems to be the case even in the western world. Many pupils may not be aware why they are in school and what they will do after their schooling circle. This does not water down the need for the formal school curriculum to include vocational or occupational skills that would expose some future career prospects in pupils as suggested by King *et al.*, (2002). One respondent said the following in agreement with what has been said above:

For formal schooling to be considered relevant to the needs of the people; the curriculum should include some kind of vocational preparation. That way, the curriculum will be seen to be a relevant and a useful tool to prepare school leavers at whatever level they are (Mr Nkole, 30 November, 05, Group two).

The views expressed above seem to suggest that the career building would be encouraged if practical skills embedded in the Chewa AIKS were included in the formal school curriculum. The primary school level seems to be identified by many respondents as the right time when pupils should start identifying themselves with what they will do for themselves and for the community. The findings have shown that there is need to recognize Zambia as a developing nation in need of practical skills. I would like to argue in support of this notion because it is important for any education system to have priorities considered relevant by the people. The paradox identified in this research is that again any career associated with vocational and occupational skills are considered inferior and less favoured by the same community. I, therefore, support one respondent who argued that many Zambians needed to change their mindsets on what they perceive to be jobs:

There is need for change of mindset for some of our people who wrongly think practical skills are for the uneducated people and that only white-collar jobs should denote employment. For people to associate these practical skills with school and appreciate them, they must be included in the primary school curriculum right away (Nyambezi, 5 January, 06, Group two).

Some of the views gathered were a reminder of Kaunda's Education for Development whose emphasis was education with work as expressed by one respondent:

We need relevant practical skills. We want our university students to learn how to make an Inter-connector (IC) and not to learn how to replace one. We need plumbers; we need builders, carpenters etc people who can use their hands and not just their brains (Mtololo, 7 February, 06 Group one).

The findings have identified primary school as the right time and place where these career giving subjects should be offered and not after the child has failed to go further in his or her schooling education. This thought is captured in this quote but shared by many respondents both in interviews and focus group discussions:

These skills should not be offered in centers that only cater for the out-of school and unemployed youths. These skills must be included in the primary school curriculum before pupils are stigmatized as failures (Mtololo, 7, February 06, Group one).

I would like to argue in favor of the point of view expressed in the above quotation. Such a step may even see the introduction of post primary skills to be offered to pupils who do not go to high school. However the discrepancy found by this research is that the Technical Education, Vocational and Entrepreneurship (TEVETA), which offers these courses, has no program in the primary schools but targets the out of

school youths, who, paradoxically, include the primary school 'failures' (see Table 2). This is what the respondent from TEVETA said:

We do not have programs at primary school level. We had planned with the former minister of Education to link secondary schools with colleges doing Agriculture, Engineering, Business studies, Arts etc. The pupils in these secondary schools were to take subjects that would link them to particular higher institution of learning. These linkages were meant to help pupils identify their possible careers and pursue right courses while at school. This good idea died out when that minister was removed (Ms Musanda, 30 /11/05 Group 2).

We can argue here that these vocational or occupational (Rogers, 2003) programs projected to link secondary schools to colleges should have started from primary school by capturing traditional skills like, bee keeping, basket –making, gardening, farming, fishing, crafts, wood work, local food preservation and processing and many others (see Figure 27). Such a plan would fit Nyerere's (1968) vision of making primary education not a pre-requisite for secondary education only but even an end on its own, where its graduates would be skilled enough to start some income generating ventures (see Education for Self-Reliance in chapter three). The idea that vocational and practical skills' training should start from primary school was strongly supported by many respondents. The argument advanced by a number of respondents is that the current education system has missed the real thing that people want as expressed below:

You know what, if today you (researcher) started a school that were teaching only the practical skills relevant to the needs of the society and the country, such as plumbing, local food processing, tailoring, fishing, farming and gardening, bee-keeping etc you would have no space for the pupils. You would have targeted what people want (Mtololo, 7 February, 06, Group one).

It is important to note, however, that some of these practical subjects when offered in high school as optional do not have pupils. As already argued before, more pupils go for academic subjects for perceived economic benefits and this seems to be the real thing people want.

We could, therefore, argue that the desire by many respondents to include practical and occupational skills in the school curriculum seems to have very little to do with cultural preservation but economically motivated. I agree with the view that the inclusion of the practical skills in the primary school curriculum may not enhance any career building if they were not linked to entrepreneurship and apprenticeship programs. This was strongly phrased in this way:

The inclusion of the indigenous knowledge systems into the school curriculum can only work if it is linked to the scientific and technological dispensation of monetised economies. If advocates of AIKS push and provide funding, yes it can work. However, the effort would most likely be fruitless. The answer is in entrepreneurship of apprenticeship. (Dr Kasenda, 01 December, 05, Group two).

Furthermore, I would say merely integrating the Chewa AIKS into the formal schooling would not automatically translate into career building. I support Sillitoe *et al.*, (2005) view that there may be need to develop a coherent indigenous knowledge intellectual framework that should interface effectively with science and technology in order to inject in entrepreneurship and the promotion of the local industries and institutions. The findings in this section seem to suggest that pupils and the community would only appreciate the importance of these skills if they would earn them a better living and not just a piece of paper(certificate).

Non- use of the perceived Chewa AIKS pupils bring along to the classroom

The question here was focusing on what indigenous knowledge pupils bring to school and whether or not teachers [and the curriculum] make use of them. Classroom observations were aimed at finding out if teachers make an effort during their lesson preparation and delivery to use the Chewa AIKS pupils already have and are relevant to the subject matter being taught. This is in line with the education principle of moving from the known to the unknown. Interviews, focus group discussions, documentary analysis, field notes and the checklist on farming and gardening IK were the main tools used to gather information on this issue.

Findings from the classroom observations and focus group discussions with teachers showed that teachers hardly make use of the aspects of indigenous knowledge pupils bring along with them to schools. One teacher interviewed after a focus group discussion, gave reasons why they do not teach or use pupils' indigenous knowledge in class:

We do not teach the Chewa AIKS because not all the teachers at this school are Chewa and familiar with the Chewa IKS. Besides we focus our teaching on topics that will likely be covered in the examination. If we do not do that our pupils will fail and the parents and the Ministry of Education officials will all be on us (Focus Group Discussion Mphangwe Basic School, 01/01, 06 Group two).

Such findings from parents show that the fear of the examination seems to overwhelm teachers, pupils and parents. On the part of teachers, such fears could steal the initiative to include other forms of knowledge which were not included in the

examination, a view refuted by Dole (1980) (see Figure 7). The wrong notion that they are to teach the Chewa AIKS rather than build on it could also create the fears in teachers as expressed above. Some proof that pupils have the Chewa AIKS in farming is captured in the quotation below:

We know that by the time these pupils come to school at the age of 9 or even 10, they have plenty of farming and gardening skills. Some of these pupils have their own small maize fields and vegetable gardens where they grow some crops and vegetables for sell to support themselves at school (Community school mentor, Stella Banda, 31st December, 05, Group one).

There were a lot of contradictions in the ages of pupils in the four schools visited. However, in the two community schools visited, there were some pupils in Grade seven who could have been over seventeen years old (see picture 18). An important revelation that came from some respondents in the four primary schools (especially the two community schools) visited was that the majority of the pupils in Grade seven had their own maize fields and vegetable and garlic gardens. They sell the garlic to raise money for school and support their families, yet these activities are not practised in schools. The checklist used showed that the majority of them indeed, knew a lot in farming and gardening long before they came to school:

Picture 18: Grade 7 Pupils at Tikondane Community School



Source: Researcher after class observation and the AIKS Check list exercise. (2, February 06).

Field notes gathered seem to support the notion that teachers do not make use of pupils' indigenous knowledge they bring to the classroom from their communities. The field notes further showed that even the pupils' involvement in farming and

gardening while in school is insignificant and sometimes not there. At *Chakumba* Community School visited, two pupils were asked if they got involved in some farming or gardening activities within the school and below were their responses captured in my field notes:

We do some weeding in the school maize field especially when we are on punishment. But we do a lot of such activities over the weekends at home with our parents. They teach us how to space the holes when planting the maize seeds using our feet. They say the maize plants will turn yellow and give very thin cobs (Kapesa, 31 December, 05).

We do some weeding and clearing of the maize field once in a while, especially when our teacher has not come and there is nobody to teach us. We are told to go to the field to work (Mkweza lamba, 31 December, 05).

The findings revealed that pupils do some weeding and planting as punishment, or when there is no teacher in class further. This practice reinforces negative attitudes for farming and gardening skills already there. Classroom observations showed that there were no curriculum-based efforts to involve pupils in farming and gardening on regular basis. Those observations were not based on any lesson plans as the teachers observed had prepared none at all. While it is possible that the two pupils quoted above may have learnt the farming and gardening skills unconsciously from anywhere as suggested by Rogers (2002) on how pupils learn, what seems to be clear in this particular case is that the assumed unconscious learning is outside school premises. This is as a result of lack of farming and gardening activities in the school. Besides, teachers in the focus group discussions said that many children started school late. Some started when they were as late as ten or even 12 years old. In Community schools, most of the pupils were above the primary school age (7 -14 years). This could be assumed by taking a look at Picture 18. Some respondents claimed that it was a common practice among the Chewa people to train their young in farming and gardening skills at an early age. Some respondents' observations were that class attendance was very poor during the farming period as many children accompanied their parents to the maize fields and gardens. No effort was made to look at class registers as this was not the main focus of the research though an important finding.

More findings from documents and training manuals have shown that the Agricultural Science subject, where farming and gardening are among the components taught, is included in what is called Integrated Science. The expected objectives to be achieved

at the end of Grade 7 in the Integrated Science do not mention any farming or gardening per-se as seen below:

By the end of Grade 7 learners are expected to develop:

- An attitude of scientific curiosity and enquiry.
- The ability to generate new ideas.
- Ability to co-operate.
- Willingness to share knowledge.
- An understanding of human beings and their environment.
- Awareness of variety of life.
- An understanding of the relationship of living things in their environment, and
- Knowledge and skills in health and nutrition (MOE, 2003:25).

The points above do not seem to suggest that some farming and gardening are part of the syllabus to be covered unless implied. The argument I would like to advance through these various findings could be that pupils' valuable skills in farming and gardening, considered important by many respondents, may not only go to waste while the pupils are in school, but could eventually be forgotten. This could be at a crucial time when they are "pushed /dropped (see Figure 6) from school and are now in the community that survives on farming and gardening. Once in the community, such out of school children have nothing to offer. This is the fear exemplified by the majority of respondents in this study. These fears are similar to those in Serpell (1993) study discussed in chapter three.

Documentary analysis supports the view that even in secondary schools, where Agriculture Science is taught as an independent subject, it is optional and few pupils take it (MoE, 2005). Such findings go further to show why some of those who leave school at Grade 9 and did not take the Agriculture science subject join the community with no farming and gardening skills at all. Even for those who take the subject, the agriculture they learn is for commercial and not subsistent farming (see chapter one on 'why the choice' section). Although the focus of this study was primary schools, this information is important to this study as it shows the negative effects of the curriculum beyond primary school level.

The importance of using the knowledge pupils already have as a foundation for new forms of knowledge found support in the experiences drawn from the Zambian literacy program called Primary Reading Program (PRP) that has now been taken to scale after the pilot phase. One respondent and a coordinator of this program drew a similarity between the emerging knowledge (pre-reading skills) and the indigenous knowledge in this way:

When pupils start Grade 1, they are given a 'performance test'. This test identifies 'emerging knowledge' (This includes pre-reading knowledge or skills such as handling book/pencils). These bodies of knowledge are very important for the achievement of initial literacy. Similarly, I think the indigenous knowledge pupils bring along with them to the classroom could also be very important for the effective learning/teaching and motivation on the part of the pupils (Mr Tambu, 6, November, 05, Group two).

The argument advanced by the respondent is that teachers should make use of that emerging knowledge pupils bring along with them from the community when they start their initial literacy programs. His assumption is that in a similar way, the indigenous knowledge pupils bring from home could also be used to bridge the assumed gap between school and community knowledge. The use of IK in this like - manner is supported by George (1995: 85) when she argues that:

Indigenous knowledge may be used to teach language, to explore values, to recount history, to analyse changes in attitudes over time and in science may permit pupils to relate effectiveness of IK and school knowledge for the conduct of their lives.

Seepe (2000:132) also gives another advantage pupils have when IKS is included in their classroom work:

Starting with indigenous knowledge system would encourage learners to draw on their cultural practices and daily experiences as they negotiate and grapple with new situations and unfamiliar terrain [in the school curriculum].

The notion that most learning on the part of children takes place outside school also finds additional support in what Rogers (2003) says in a question and answer session with Knud Illeris:

You seem to equate children's learning with school. I see most learning as taking place naturally in a social environment without aims and objectives. It is estimated that some 82% of all children's learning occurs in social interactions [peer groups, singing songs, and dances, various social gatherings like funerals, ceremonies, markets, streets etc, fields without a teacher] (Rogers *et al.*, (2003:18:25).

Views expressed in the above quotation seem to support the findings in this research that a lot of practical knowledge and skills involving traditional healing, local agriculture in farming and gardening take place outside school but ignored by teachers in schools. The findings have shown that any adult qualifies to be a 'teacher' an 'adviser', 'counsellor' etc to any child as explained in the literature review (see chapter three). The findings suggest that there could be so many 'teachers' out there who pass their knowledge and skills to children. This situation may explain why so many pupils come to school with so much local agriculture knowledge and skills e.g.

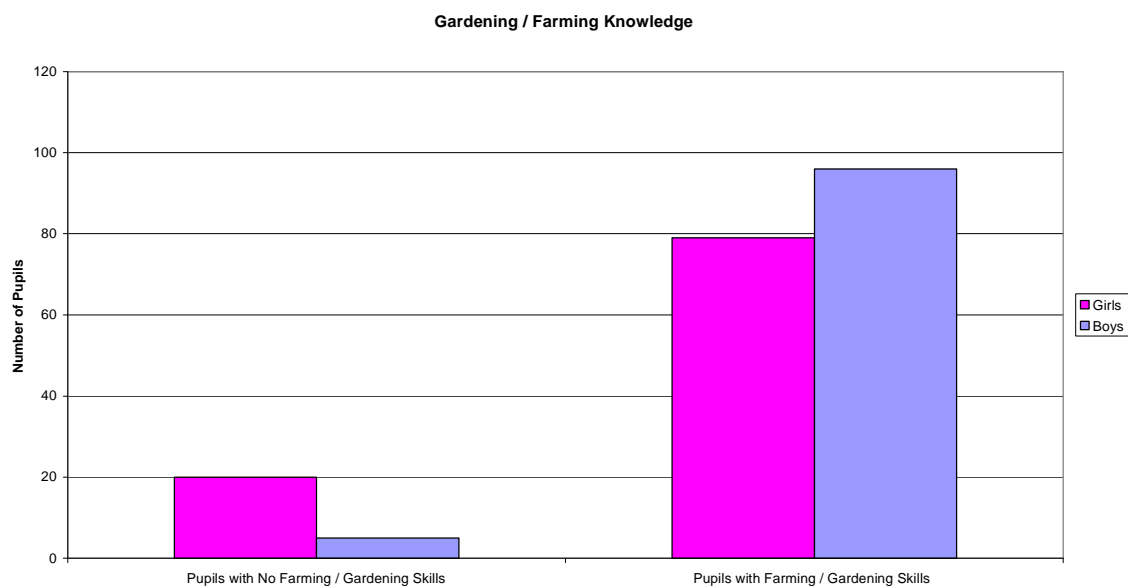
farming and gardening (see Table 10). However, this notion could be contentious because not all adults are privileged to have same information, experience or skills. It is even possible that young ones exposed to experienced adults could be more experienced than some adults lacking that knowledge.

Findings from the checklist on farming/ gardening skills among Grade seven pupils

Findings from the checklist seem to, further, support the notion that while pupils have a lot of indigenous knowledge from the community and elsewhere other than school; teachers do not make any deliberate effort to use it during their lesson preparation and presentation. Findings show that out of 200 Grade 7 pupils involved in the check list exercise, only 20 girls (10%) and five boys (2.5%) claimed they had no knowledge on gardening and farming skills (see Figure 27 for the specific skills highlighted in the questions asked). The 20 girls and five boys who said they had no knowledge of farming and gardening were from a peri-urban school and possibilities may have come on transfer from urban schools where other practical skills other than farming and gardening are emphasised. 79 girls (39.5%) and 96 boys (48%) claimed they had knowledge of farming and gardening (see chapter five for specific skills in gardening and farming that were included in the checklist). These figures are captured in Table 10 and the bar chart below:

Table 9 : The Check list of the Chewa IKS (Farming/ Gardening skills) Pupils bring along to school involving 200 Pupils (F=89, M=111).

Gardening/ Farming	Pupils with no Farming/Gardening skills				Pupils with Farming/Gardening skills			
	F	%	M	%	F	%	M	%
	20	10	5	2.5	79	39.5	96	48



Source: Findings from the field work

The issue of having pupils with no Chewa AIKS should be given a context. Since the skills checked were only those considered very common by the respondents and valued in the area (Farming/ gardening), pupils identified as having no Chewa AIKS could be from other regions where other practical skills are emphasised (Figure 27 for the practical skills captured for the whole country (MoE, 2005). So the pupils said to have no Chewa AIKS here refers to farming and gardening skills only. The less number of girls with these skills could also be because gardening and farming are stereotyped as boys' jobs in the area.

The teachers who were involved in the administration of this checklist knew the pupils' parents and in some cases had even visited the gardens and farming fields owned by some of these pupils or parents. One head teacher of Kaingo School observed was asked the possibility of some pupils cheating they had the skills when they may not, said the following:

If you asked me to point out the pupils in that class who have skills in farming and gardening I would have done that without asking them. We often visit their parents. Some of these pupils grow vegetables, maize and garlic in their own gardens. During farming season, we have a lot of absentees in our classes because most of the pupils help their parents with the weeding (Mr Mwira, Kaingo Basic School, 04 February, 06 Groups two).

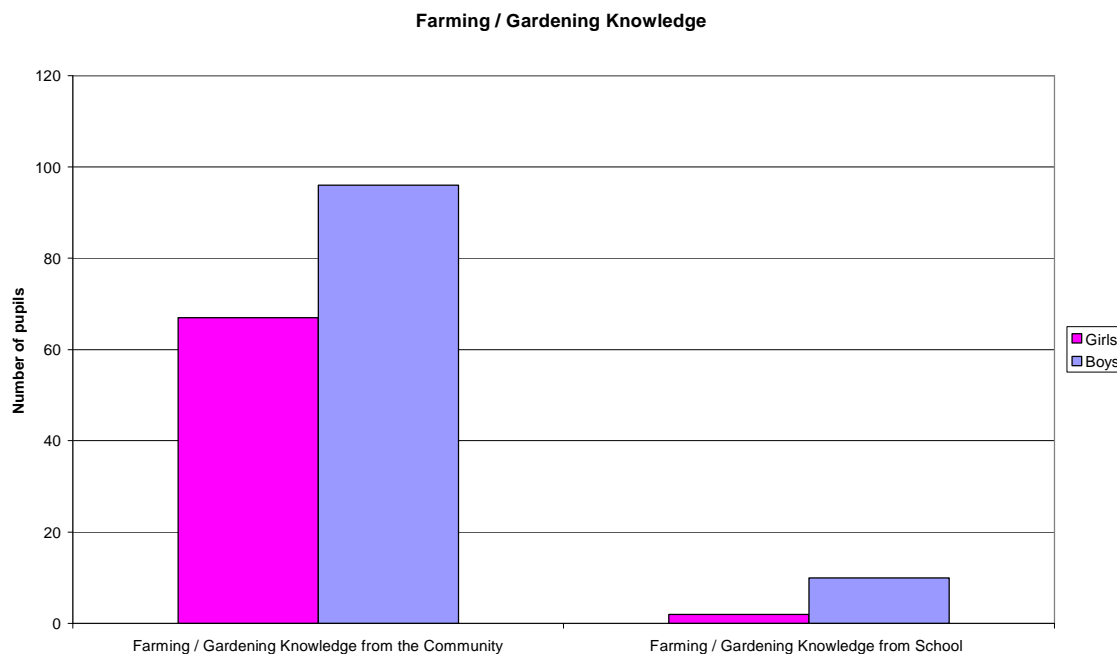
Such findings show that even teachers are aware of the knowledge pupils bring from their communities but fail to build on that knowledge. Such findings also bring to question the idea of having same and rigid holidays for pupils in urban and rural

areas. Among the schools observed, only the two regular schools *Mphangwe* and *Kaingo* had very small production unit gardens though with nothing growing at the time. The two community schools, *Chakumba* and *Tikondane* had very small gardens and fields. The reason could be that in the past it was government policy that all schools should have a production unit where pupils would grow some vegetables or so (Kaluba *et al.*, 1989). This policy is no longer emphasized, though not cancelled (see chapter two). However, these four schools observed did not even have farming or gardening on their school timetables.

When asked where they acquired the farming and gardening skills from, 67 girls (33.5%) and 96 boys (48%) said they got them from their communities. Only two girls (1%) and 10 boys (5%) said they learnt those skills from school. It is possible that the two girls and ten boys who claimed learnt the gardening and farming skills could have come on transfer from other schools. Some field notes revealed that some schools in the same district do cultivate maize for sell to raise money for buying footballs and jesses. In some cases, pupils are hired to go and work in people's farms or gardens to raise money for the school or school clubs. Farming and gardening skills acquired by doing these extra curricula activities can still be categorized as skills acquired at school. Table 10 below shows those who claimed learnt the farming and gardening skills at school and in the community:

Table 10: The Check list on sources of the Chewa IKS (Farming/ Gardening skills) either school or community.

Gardening/ Farming	From the Community (observation, instructions, apprenticeships)				From the formal School curriculum			
	F	%	M	%	F	%	M	%
	67	33.5	96	48	2	1	10	5



Source: Findings from the field work

Further findings have revealed that some pupils bring to school knowledge in herbal medicine as well. One herbalist interviewed acknowledged that there were so many things children learn from the community in veterinary and herbal medicine. He summarized his views this way:

Our children know a lot of herbs and roots that can enhance the quick growth of their private parts bring headache relief and the cure for their cattle (veterinary medicine) when they look unwell. They know shrubs and roots that are used as repellants for snakes and mosquitoes (Boniface, 01, January 06 Group one).

The possibilities of pupils having all that knowledge in local medicine find support in a South African document on policy development on IKS. Quoting the Traditional Medicine Strategy of the World Health Organization (WHO), the document says:

In Africa, up to 80% of the population use traditional medicine to help meet their health care needs. In Asia and Latin America, populations continue to use traditional medicine because of historical circumstances and cultural beliefs. In china, traditional medicine accounts for around 40% of all heath care services (Republic of South Africa, Policy Document on IKS (2005: On line).

The findings in this section have revealed that pupils bring a lot of indigenous knowledge which they could use as a foundation for their various subjects in school. This is what is proposed in Barnhardt *et al.*, (2005) and Sillitoe *et al.*, 2005 models (see Figures 15 and 17). These indigenous knowledge and experiences could easily find themselves in the classroom the Chewa AIKS hybridizes with the formal school

curriculum. However, some respondents have given views with an impression that IKS should be used as an ingredient to make the teaching of other core subjects in the formal school curriculum interesting. This is the view Pottier *et al.*, (2003:3) disagree with when they talk about the anthropologists' and developers' use of IK in science:

The initial search for indigenous knowledge convinced both the anthropologists and developers that it was legitimate to look for and extract local knowledge [IK] elements for use in science. If local knowledge [IK] had anything to offer, it was because science could make use of it.

More literature review has shown that IKS should be considered and treated on the basis of its value and formal school should not be the deciding judge as argued by Pottier *et al.*, (2003); Sillitoe *et al.*, (2005) and Warren (1998) (see chapter two and three). This is also in line with Sillitoe *et al.*, (2005) who suggest that the formal school and the IKS should feed each other through research and dialogue and avoids the 'we' (science or 'school') and 'those' (IKS) approach (see figure 16).

The perceived absence of the Chewa AIKS in the school text books

Some respondents argued that the type of textbooks used in primary schools could also be contributing factors to making the subject-content in many subjects limited to the text, difficulty for pupils to comprehend and contribute to pupils' lack of appreciation for formal school education. This view finds support even in old writings such as the following:

If the experience outside the classroom is unrelated to the material in the text used in a conventional academic discipline, learners may just be limited to that particular area of study which is defined by the text and the teacher (Whipple, 1957:20).

Findings from other studies in Tanzania and Kenya on the use of textbooks that do not depict what teachers and pupils experience seem to agree with findings from this study. Based on the interview results from those studies, Semali (1999:311) reports how one teacher summed up the dilemma that many teachers faced, as follows:

Very often, teachers follow traditions and customs that are not shared by the national culture; participate regularly in rituals and beliefs that are not similar to what they teach or read in school textbooks; and rationalize and make plans for their future and the future of their children based on epistemology sometimes anti-theatrical or in direct opposition to Western or European epistemologies prevalent in current school books read daily by African students.

A specific example that teachers and textbooks seem not to take advantage of is the experience in the counting systems that children have from their communities. This is

in mathematics, the subject that is poorly done in many schools and contributes so much to drop outs rates. One respondent made the following revelation:

Among the Chewa, counting is in base 5 and in English it is in base 10. All the mathematics text books introduce the counting using base ten and ignore completely the knowledge of base five that a Chewa child knows and has used and uses once in the community as they count animals, poles when constructing a maize granary (Kaphe, 25 February, 06 Group two).

The same respondent further cited local games that have a lot of mathematic and science concepts that pupils know from the community but teachers and school text books never make any reference to:

Among the Chewa people they play a lot of games that have mathematic concepts. I have in mind games like *Nsolo*, *Chiato* and many others that have a lot of mathematical concepts but which textbooks and teachers never make use of. They can make a full mathematical lesson based on the concept of *Nsolo* or *chiyato*, for example. (Kaphe, 25, February 06 Group two).

Document analysis on works Serpell (1993) did among the Chewa people on the significance of schooling shows that *Nsolo* and *chiyato* do not just exist but are very common games boys and girls play respectively. He describes the two games as follows:

Nsolo is a well-known Pan-African game played by boys and men. It calls for two or four parallel lines of holes along which stones which are moved in accordance with elaborate rules. It calls for considerable planning as well as numerical calculation.

Chiato is a game confined to girls. This is played sitting in a circle around a small hole in the ground. A number of small stones are placed in the hole and a player's task is to scoop out specific numbers of those during the time between throwing up another stone and catching it in the hand (Serpell, 1993:65).

Many respondents felt that the two games described above (*Nsolo*, *Chiato*) would provide background information to a mathematics lesson dealing with counting and equations, for example. These findings have reiterated the point highlighted in the literature review that textbooks used by pupils do not capture the indigenous knowledge pupils have that could actually provide some background information in the various subjects. One respondent put the blame on curriculum developers for not checking whether or not the textbooks used in primary schools take into account the indigenous knowledge-pupils have. These views are captured in this quote:

Most of the core textbooks in schools present issues as if pupils do not have any knowledge of any kind when they come to school. Teachers follow the textbooks like a Bible. Teachers can build on knowledge pupils already have and relate that to the new topic they are teaching (Daniela Banda, 25, December, 05 Group one).

Views of this nature are in agreement with those that are discussed in the literature review and seem to be congruent with views of frameworks and models of hybridization (Illich, 1971; Reimer, 1971; Adedipe, 2004; Barnhardt *et al.*, 2005) (see chapter three). Teachers are compelled by the ministry and parents to make pupils pass examinations. If AIKS is not included in the examination regime, teachers and pupils alike will not consider it. On the other hand, the blame cannot be centered on one group of people alone (Curriculum developers). Relevant curricula are often those that are a product of all stakeholders through research and dialogue as suggested by Sillitoe *et al.*, (2005) (see Figure 17).

Attitudes and perceptions toward formal school as a ladder for socio-mobility from poverty

Findings from the interviews and focus group discussions show that many respondents, in both groups have assigned the schooling education with an economic role to play in society. The majority of the respondents in both groups consider schooling as the main path for economic prosperity and empowerment and, therefore, the only sure way of running away from poverty and unemployment. A parent sounded this point as the reason why she sent her son to school:

A child must learn at school so that the child can read and write. When that child finishes her/his education, he /she will look after him or herself and be self-reliant and develop the country (Tikambe 24/12/05, Group 1).

Such views suggest that there could be many respondents who follow taxonomy four and five of Illich (1971) theory where education is to give certificates which are passports for job offering (see chapter three). Furthermore, some findings have revealed that many parents send their children to school as a form of future investment and source of security for them when they are old. The views gathered through interviews and focus group discussions seem to suggest that some parents strongly believe that when their children complete any level of education, they would find white-collar jobs and look after them and bury them when they die. However, when such expectations are unfulfilled, disillusionment about the whole purpose of sending children to school, and on formal school education, in general, set in. Many respondents, both in focus group discussions and interviews shared this view. One traditional leader and a participant in a focus group discussion at chief Kawaza's palace reasoned this way:

Kuphunzisa ana kuli na phindu Chifukwa akapeza nchito azakusunga ndipo ukafa uikidwa mwaulemu ndithu Siungafele padzuwa yai.

Translated into:

Educating children [to mean sending them to school] is very beneficial because when they finally get jobs after school, they will look after you. When you die you will surely be given a proper and respectful burial. You cannot die in the scorching sun (Kachiti Kawaza FC, 03 January, 06, Group one)

The use of the expression 'dying in the scorching sun' (*Siungafele padzuwa*) to mean you cannot die in abject poverty with no proper send-off to the grave is a very strong expression among the Chewa people describing a condition of being helpless. It is interesting that repeatedly, many respondents have indicated that the main role of school is to guarantee and offer employment to all those who go through it. More findings from the focus group discussions show that when children finish their schooling education and fail to secure any formal employment, many parents do not just feel cheated by the formal schooling education system but also feel robbed of their resources spent in educating their young ones. The findings in this section have revealed that the majority of the respondents say some parents and children shun formal school education because of its perceived failure to reward their children economically and serve them from poverty. This view was more pronounced among respondents in group one. The reason could be that most of the respondents in this group are from a rural part of Zambia, where poverty levels are higher than in urban as explained by Kelly (1994). The focus group discussions involving the chief's counselors seem to support the notion stated above and in very strong terms:

We waste a lot of money on our children's education in school. Sometimes one can finish selling all the cattle in the kraal to find money for the child's school. With a girl, she can come back with a pregnancy or may be fail the examination and cannot go further. Nowadays, even when a child finishes school, there are no jobs at all. They just remain here in the village doing nothing but just killing snakes (Sikeva, Kawaza F G D, 03 February, 06, Group one).

The expression '*akupha njoka mmudzi*' (He kills snakes in the village') is not just a Chewa expression but also found in other Zambian languages like *Bemba* (*Bakapaya ba nsoka*) that denotes lack of employment or having anything to do. This implies that each time women and children, who often remain in the village saw a snake, they would call the jobless boy to kill it for them. This becomes the boy's regular occupation and pass-time activity in the community. One traditional leader, with the rest of the focus group members nodding their heads in corroboration, had this to say:

During the British colonial days even a standard 4 would find a job. Now even if a child reaches form 5, there are no jobs. Meanwhile you the parent will have just broken your back [*msana pekete*] with farming for nothing. To make matters worse, at school, they do not learn any practical skills like farming, at all, but just English things (Banda Kawaza FGD 03, February, 06 Group one).

The expression *msana pekete* (breaking one's back) used here is a very strong Chewa expression of showing feelings of great loss that a parent may have after spending all he or she had on the education of a child but cannot get any reward back. Such views make those who do not send their children to school or children who willfully withdraw from school feel justified (see Chapter three). Note that years spent in school signify the kind of a job you get. The more years one spends the better the job one gets. The rewarding of those who spend more years in school seems to reinforce the notion that academic subjects that require more years are better and more paying than the practical and vocational subjects. Members of a focus group discussion involving teachers also supported this view and argued that many parents did not send their children to school because schools did not reward their graduates. Two participants in a teachers' focus group discussion made the following observations:

Some parents do not value education anymore. They have many school leavers in the communities who finished school but cannot find jobs. Some parents feel marrying their daughters would be a better idea than making them waste time at school. (Teacher 2 Mphangwe School FGD 3 February, 06).

Many parents would rather involve their children in money-generating ventures. They do not see any difference between those who went to school and those who did not but are farming. If anything, the latter are much better economically (Teacher 4, Mphangwe School, FGD, 3 February, 06).

The findings have also revealed that some parents preferred involving their children in selling second hand clothes locally known as "*salaula*" to sending them to school. Some establish *tuntemba* (A colloquial term for small stalls along streets). The majority of respondents lamented that many of such business ventures end up nowhere as these pupils do not have any skills to manage them. Their conclusion was that at the end, such children lose both school and the small-scale businesses of selling second hand clothes. My argument is that communities do not have role models from schooling education as schools are in a habit of producing failures in school and eventually in life as well. However, those who did not go to school but are doing well with farming become role models as expressed in the quotation below:

Many parents and children do not see many role models who finished school and are doing well economically. Instead, they see those who never set their foot in a

classroom doing very well with the growing of garlic, sunflower, and cotton for sell. They see no point in sending children to school (Teacher 5 Mphangwe School, Focus group discussion, 3, February 06).

My argument is that the quotation above seems to suggest that the growing and selling of garlic, sunflower and cotton are not for those who go to school. This view could possibly change if the growing and selling of such lucrative crops were part of the school curriculum. Pupils could grow and sell these crops both at school and in their communities. More findings seem to suggest that views on the perceived economic role of formal schooling are not only shared among the traditional or rural people, (Group one) but also even among the educationists and implementers of educational policies (Group 2). One senior education officer gave the following comments on the perceived irrelevance of the current schooling education:

The kind of formal education we have been following does not suit our environment. We now have young men and women who have finished their formal education yet they do not know what to do with their much-cherished education. Such a situation has made some people lose trust in the whole education system. In fact they feel betrayed by the education system (Ms Zulu, 8, February, 06, Group two).

The economic role given to schooling has been well documented in other studies (Leacock, 1976 and Serpell, 1993) as one major reason why some parents and pupils themselves appear to have lost interest in the formal school education (see chapter three) Field notes also revealed that some youths who left primary school even before completion think they made right decisions to do so. When a boy, who left school before sitting for the Grade seven examinations was asked if that was a right decision said this with a smile:

Eee ninachita bwino Sinidandaula yai Phindu la sukululu lilipoti apa? Nanga pakuti anzanga omwe anapitiliza mpaka Grade 9-asowa chochita muno mmudzi. Ine zelu zanga zili paulimi basi osati sikulu yai (Mabvuto, 4 February, 06)

Translated into:

Yes, I did the right thing (to stop school). I do not even complain at all. Where is the profit from schooling? Because even those friends of mine who went up to Grade 9, they do not even know what to do in the village now. As for me my mind is now set on farming. That is all and not schooling.

(see chapter three for similar comments in Serpell's (1993) research findings).

Further findings have shown that children who leave school purposefully, like the one above, are yearly joined by a number of those pushed or dropped out of the system after 'failing'; the examinations (see Table 2). Field notes revealed that there is an

expression in the area used to refer to those who do not make it to the next Grade because of an examination. They are said to have been sieved (*Kusefewa*). (This is a term often used when sieving maize mill and what is sieved are husks or chaff, meaning that those pupils that fail the examinations are stigmatised as chaff). A documentary analysis also supports this view. Serpell (1993:12) explains the dilemma parents find themselves in when they send their children to school. He calls it a 'moral trap' the failure by the schools to call children they have kept for seven or more years, 'failures'. His conclusion, which is in agreement with views by many respondents, is that parents who make their children remain in fishing camps doing farming/gardening instead of sending them to school, may merely be reacting to the failure by the school to reward its graduates with white-collar jobs. The frustrations in parents whose children are reduced to 'chuff' find support in Serpell (1993:12) feelings expressed below:

What is there to be proud of if 95 per cent of our children go to a certain building, sit in front of a teacher for seven years, and at the end conclude that they are 'failures' [or chuff]? (Serpell, 1993:12)

The situation described above seems to suggest that as long as entrepreneurship ideas were not introduced in the formal school curriculum; many parents would be disillusioned with the outcome of formal schooling. Documentary analysis further shows that some local educationists (Kelly, 1994; 1999) describe the education structure Zambia is following to be a pyramidal one (see Figure 6) that throw away 'half-baked' and 'illiterate graduates' into the streets and community with no practical skills to rely on. On Zambia having a throw-away education system not compatible to EFA, one respondent had this to say:

Even if you had 100% enrolment at Grade 1, very few will progress further with their education because our education system is a throwaway system. Those thrown away join the community as 'failures'. Parents focus on these 'failures' and some wonder whether it is worthy spending their little resources on the kind of education that will not take their children anywhere (Mtololo, Group 1, 7 February, 06, Group two).

Barrow (1978) argues that there should be a change of public attitude and expectations in relation with what the community think formal education should offer. He argues that the community could be expecting too much from schools. He is supported by Dore (1980) who holds that the main purpose of formal education is not to make children go to school, qualify and get good certificate that can give them jobs but to make pupils identify and develop skills and attitudes which will help them to do the

jobs better than those who did not go to school. However, majority of the respondents focus on job guarantee as the main role of school. My argument is that Dore's (1980) and Barrow's (1978) assumption could be in theory and not in practice. In reality, what seems to be the main aim of schooling education is formal employment. It may not achieve this but that is its goal.

Attitudes and Perceptions toward the mainstreaming of the Chewa AIKS into the Primary School Curriculum

The need for every child to have both the formal schooling education and the Chewa AIKS was expressed by many respondents. The majority of the respondents felt that integrating the Chewa AIKS into the primary school curriculum would make pupils continue doing what they learnt at school in their communities and vice versa, so that school becomes the mirror of the community. This is how one respondent put it:

If schools were to give the education that will prepare our children for life, they should work together with the Chewa AIKS. The two must be integrated so that our children learn not just in schools but also in their communities. The community should act as eyes of the school and the school as a mirror of the community. We need to do away with the education system which measures its usefulness only through the passing of an examination and obtaining a certificate. (Major Mbewe 28 November, 05 Groups one).

This view is supported by Seepe (2000) when he justifies why the South African formal school curriculum should include the IKS:

Starting with indigenous knowledge system would encourage learners to draw on their cultural practices and daily experiences as they negotiate and grapple with new situations and unfamiliar terrain (Seepe, 2000:132).

More findings have shown that such integration would not only narrow the perceived gap between the school and the community, but also improve the quality of education by ushering into the primary school curriculum indigenous skills embedded in the Chewa AIKS (see Figures 27 and 28). However, this research has established that these skills could mean nothing to the parents and pupils if they failed to promote income generating ventures. Such findings are consistent with the literature review on the perceived economic role given to schooling education (see chapter three). The findings have suggested that there may be need for the government to put in place mechanisms to link these skills with entrepreneurship and apprenticeship plans. The issues of entrepreneurship and apprenticeship seem to be identified as the recipe for development in other research work from other countries as well. A recent research

paper on income generation perspective in non-formal education in Bangladesh showed that given a choice, learners or trainees would suggest skills to be imparted through training and topics or subjects to be included into the curriculum those that could be utilized to generate some income (Islam *et al.*, 2005). This could be the reason why some respondents maintained that quality education could be achieved through such a purposeful selection of key aspects from both, the Chewa AIKS and the formal school curriculum. This is what Gandhi said in Prakash (1993:294) that “there must be union between indigenous knowledge, livelihood and living and indigenous knowledge should be viewed as an economic resource to be exploited in the development process.” One respondent suggested how this could be achieved in Zambia:

We need a curriculum which is relevant to the pupils' environment to produce an all round pupil; a pupil able to do both academic subjects and practical skills relevant to needs of his or her community, be it in rural or urban setting. You cannot detach people from their everyday lives and from their environment. Those living near lakes and plateau have skills suitable to their areas and their children should learn about those skills in schools as well. (Sikazwe, 6, January, 06, Group two).

While the above quotation suggests that an integration of the Chewa AIKS and the formal schooling should be done through the expansion of the interception set between them (see figures 14 and 15), some respondents seem to imply that it is the formal schooling system which must have the power to select from the Chewa AIKS what it considers to be valuable. Such views are captured in the quotation below:

There are some universal things about curricula that we must not ignore, but we can still look at some key things from AIKS that we need and incorporate them into our school curriculum so that we make it relevant to the everyday needs of the people and the country (Prof. Msambacheme 11, January, 06, Group two).

Views expressed in the quotation above seem to suggest that one form of knowledge is more superior than the other and the proprietors of the superior knowledge are to judge what knowledge from the inferior side could be accommodated in the mainstream one and not for its own benefit but for the other. I tend to differ with this notion and favour what Sillitoe *et al.*, (2005) and Barnhardt *et al.*, (2005) propose that the two forms of knowledge must complement and learn from each other. The including and excluding of knowledge is to be done from both forms of knowledge. The findings have shown that underpinning the integration of the Chewa AIKS with the school curriculum is the economic value that would come out of it in an event where no formal employment is found. Perhaps this may be one of the benchmarks to

be used to measure what should be included or excluded. The economic value highlighted here is supported elsewhere by Emeragwali (2003: on line) who concludes that:

It is at the level of economic sustainability, self-reliance and cost effectiveness that AIK continues to prove its viability and strength. The most vibrant sectors of African economics at this present time are the informal sectors, sometimes referred to as the second economy. The interesting issue here is that many agents and agencies associated with the second economy tap into the accumulated skills and expertise and indigenous knowledge systems from traditional Africa.

The findings have revealed multiple functions that the Chewa AIKS would play if integrated with the school curriculum. The findings identified the Chewa AIKS as the source of some virtues such as good behaviour. One respondent, a former member of parliament and Army officer, interviewed on a bus, claimed that the impact of AIKS was behind the exemplary behaviour of the recruits in the Army drawn from rural areas where AIKS was perceived to be strong as compared to those recruited from urban areas:

When I was a recruitment officer in the Zambian Army, we used to get well-disciplined recruits from the rural schools where AIKS is still strong (Major Mbewe, 28 November, 05, Group one).

More findings show that the inclusion of the Chewa AIKS into the formal school curriculum would not only bring the learners closer to their environment but also be in line with the government policy of decentralization. The education policy document, 'Educating our Future', looks at decentralization as a concept that offers opportunity to those at grass root to make own decision and plan for their own development determined by their immediate environment (MoE, 1996). The findings in this study have consistently highlighted the need for the formal school curriculum to consider the pupils' environment and needs. This thought is captured in the quotation below

The learning examples should come from the learners' environment as this has a lasting impression on the mind of the learner. A province can come up with something that is common. This would avoid segmenting the curriculum in the area of practical skills and in line with the Ministry's policy of decentralization (Mr Nkole, 13, November, 05, Group two).

The views in the above quotation contradict the vision of the pilot program on the mode of integrating the identified community studies with the school curriculum as discussed in chapter three. The pilot program suggests each primary school to draw the community studies from the community within the school catchment's area while

in the quotation above the community studies are gathered from a wider area - the province²⁷. I would favour the idea of identifying the community studies (or AIKS) at provincial or district level and not at school level. This is because each province in Zambia seems to have one dominant culture. It could be easier to involve the traditional chiefs and local leaders in provincial and districts boards and committees involved with the integration of the school curriculum with the Chewa AIKS as the case is in Alaska (Barnhardt *et al.*, 2005) (see chapter three).

The idea of hybridizing the school curriculum with the Chewa AIKS, supported by the majority of respondents, is in line with Barnhardt *et al.*, (2005) Ice berg Cultural model; Culturally- Based-Curriculum model (Barnhardt *et al.*, 2005) and the Systematic Hybridization Strategy Framework (Adedipe, 2004) explained in the framework chapter of this thesis. The majority of respondents were for the integration of the Chewa AIKS and the formal school curriculum.

One issue that has appeared as problem in discussions on integrating IKS into the formal educational system is time or level at which this is to be done. Some writers have suggested higher education (Kolawole, 2005) while others have simply said as early as possible (Nyerere, 1968; Odora, 2000; 2002). The findings in this section have revealed that the effective time to include the Chewa AIKS into the formal school curriculum is when they are young (at primary school).

I feel the Chewa AIKS should be integrated into the formal educational system at all levels. That way we are bound to maximise all the benefits. There are advantages in both cases. Introducing the Chewa AIKS at primary school level would narrow the gap between school and the community for the children at the right time. This could be a very challenging time for children to be subjected to a mammoth task of constantly negotiating between two forms of knowledge to make sense of what is going on as suggested also by Seepe (2000). On the other hand, including the Chewa AIKS in higher education would speed up research leading into documentation of the IKS, protection of the IKS practitioners and their skills from exploitation as suggested by Seepe (2000); and Shroff-Mehta (2003).

²⁷ Zambia is divided into nine regions or provinces and each province save one, North Western province, has one official Zambian language used by the majority of the people there. Each of these provinces enjoys a particular culture and economic activity. Each province can be identified with typical practical skills.

However, while the majority of the respondents were for the integration of the Chewa AIKS with the school curriculum, the two respondents quoted above were not for idea. Although many respondents cited a number of gaps with the formal school system, no single respondent suggested going back to the Chewa AIKS would be a solution to the current challenges and problems facing the implementation of the EFA goals. Despite these findings, there are some aspects considered to be barriers by some respondents as discussed below.

Aspects of the Chewa AIKS perceived barriers to formal school and EFA

The findings have revealed some aspects and practices within the Chewa AIKS that were perceived to be barriers to the implementation of the EFA goals. Some of the perceived barriers were refuted by some respondents as either non-existent or products of misunderstandings. Most of these perceived barriers were cited by respondents from group two just as the majority of the shortfalls of the formal school system were also cited by more respondents from group one. When respondents cited a barrier, they were also providing what they perceived would be remedies. Below is a summary of the perceived barriers and remedies to the formal schooling programs and the implementation of the EFA goals:

Table 11: Aspects of Chewa IKS Perceived negative to formal school education

General Barriers to formal school education	Specific Aspects of the Chewa IKS perceived not compatible with formal Schooling Education from the Research Findings	Perceived Dangers
<ul style="list-style-type: none"> • The initiation ceremonies for girls who have become of age and the teachings • ownership of a chewa child by uncle and not father • Boy herding cattle for some years before enrolled in school • The <i>Nyau</i> ‘School’ for boys of age and elders who have been found wanting • Negative proverbs , taboos and sayings to girls education • 	<ul style="list-style-type: none"> • -Girls who have become of age (<i>Anamwali</i>) not to talk in the presence of men or mixing with young girls • The inclusions of sexual drills in the initiation ceremonies make girls develop new techniques. • Much of the so-called training is centred on sexual education on appeasing the future husband. • Girls miss school during the initiation when in exclusion • ‘Hyena’ (boy) visiting a girl during exclusion to have sex with her for assessment purposes. • -The formal schools and <i>Nyau</i> competing for the same boys for recruitment • -Use of gender biased proverbs, and sayings • Boys herding uncles’ cattle for many years • Teachers discuss child’s progress with his or her father leaving the uncle who has control. • 	<ul style="list-style-type: none"> • Reduction of active participation or none at all. • Reduction of class attendance by the affected girls, affecting progression and achievement rates. • The looking down gives men/boys an advantage to say or do whatever they want to. • Early marriages and pregnancies among the girls • Promiscuity leading to HIV/AIDS among the school going age as many would like to practice the new ideas • Girls and boys miss out and some stop school after <i>Nyau</i>/ initiation ceremonies • -Boys fail to enrol to school because uncles make them herd cattle. • -Boys starting school too late because of looking after cattle for over four years after school starting age of 7 years. • - Makes girls lose self-esteem and confidence to make decisions in life

Some respondents cited some Chewa traditions as barriers to the formal schooling education. The findings from the focus group discussions by teachers identified the matrilineal family arrangement as examples of some practices that are barriers to the provision of education to all. This was mainly in reference to uncles (brothers to the mother of children) who are empowered by the Chewa AIKS to exercise control over their nephews and nieces. Some participants observed that sometimes teachers find it difficult to follow up cases of absenteeism of pupils because they contact the parents of these children whose names are in school registers when in actual fact the culprits are their uncles not known to the school authorities. This is how one teacher put it:

Some pupils stop school or do not even start school at all because they herd their uncles’ cattle while these uncles send their own children to school. Even with the early marriages, it is the uncles who collect the cows paid as dowry and not fathers. The irony is we teachers often blame fathers for the mistakes done by the uncles to our pupils (Teacher 4 F.G.D Mphangwe Basic school 01/02/06 Group two).

The contentious issue about this uncle- nephew relationship is that it has a positive side as well. Nephews whose uncles have formal education or simply value formal education benefit from this arrangement as they attend formal schooling and are fully supported by their uncles. In a focus group discussion at Mphangwe Basic School composed of seven teachers, three of them confess that they completed their secondary education and trained as teachers with the support from their uncles. One of them said the following:

With educated uncles the system is helpful because they send their nephews and nieces to school. We also have a number of children who are supported by their uncles. Some of us in the group were educated by our uncles (Teacher 2. F.G.D Mphangwe Basic school 01/02/06 Group two).

There are a number of contentious issues we can observe in the quotations above. For example, it has been revealed that some men (uncles) send their own children to school and have full control over them, ignoring the Chewa AIKS, yet in the name of the same Chewa AIKS exercise full control over their sisters' children. Some field notes have also revealed that there were also some incidences when children were sent to their uncles by their own mothers and fathers. However such incidences were said to be common when the uncles were economically sound. I would argue that in some situations, it is difficult to draw a broad distinction between practices and beliefs from the Chewa AIKS that could be categorised either as absolute barriers or enhancers to EFA. This is in line with what Marsden (1994:33) says about IKS that "one aspect could be morally significant [or wrong in the world's view of one], yet without [or with] practical value" to the other.

One other traditional practice that was mentioned by many respondents as a barrier from the Chewa AIKS to girls' education was initiation ceremonies for girls who have reached the puberty stage (see chapter four on initiation ceremonies locally known as *chinamwali*). One participant in a focus group discussion who claimed went through the process and knew what she was talking about gave the following views:

Some girls after the initiation ceremonies do not continue with school because they are given into marriage or become pregnant. I know what I am talking about. I have been there before. Those women teach everything and you are left with no choice but to practise what you have been told. Some of the girls become very passive in class after the initiation ceremony. They do not participate in classroom discussions as before because they think they are now of age and do not want to interact with other classmates who are not yet of age. (Teacher 3, 3, February, 06, Group two).

Field notes also seem to support the issue of passiveness on some girls after going through the initiation ceremony. Three women after a group discussion were asked to describe some characteristics of girls who have just graduated from initiation ceremonies. Some behavioral changes mentioned seem to corroborate with those expressed by the participant in the focus group discussion referred to above:

Namwali safunika umayenda pamodzi ndi buthu yai. Azamuphunzitsa chiani buthu. (A girl who has reached the puberty stage should not associate with the younger ones (*Buthu*). What advice can the younger one give? (Manase, 6, February 06, Group one).

Namwali safunika umapenya anthu achimuna pamaso koma adzizyolika akakumana ndi amuna kapena upenya kumbali. (A girl who has reached the puberty stage should not look directly into men's faces but should look down or sideward when she meets the men folk or talking to them (Mwazona, 6 February, 06, Group one).

Namwali wolangiwa bwino afunika okhala ndi ulemu, wosisikanya osati wokambakamba yai. (A well-trained girl who has passed the puberty stage must show respect, calmness, and not being talkative) (Kwazanji, 6 February, 06, Group one).

One participant in a focus group discussion of the chief's counselors said the following:

When an elderly person is explaining some important things, a well-behaved child, ready to be taught, is that one who is very attentive and very quiet. This is how you can gauge that the child is following what you are teaching him or her. Nowadays most of these children who are not brought up according to our culture want to talk to an elderly person instead of just sit there and listen. So like that, who will listen to the other then? (Kawaza F.G.D, 3 rd February, 06 Group one).

The need to look at various discourses and their origins, whether Western or African in order to get their perceived correct usage is important as emphasized by Rogers (2003). The quotations above show that in the Chewa AIKS, the discourses of passive and active learning, rudeness and politeness are defined differently from the Western ones followed in schools. Not associating with the younger ones, looking down when facing the men folk, and not being talkative or asking questions in the presence of the men folk or in a group are signs of active learning, attentiveness and politeness. On the other hand, failure to do the same is interpreted to mean lack of patience, understanding or even a sign of rudeness on the part of a learner or a listener. Paradoxically, these were the same characteristics identified as barriers to girls' education by some participants in the teachers' focus group discussions. In such situations, learners are misunderstood by both the teachers at school (when they practice the AIKS discourse of politeness) and misunderstood by the community

when they practice the formal school discourse of active learning and participation. (see the section "why the choice" in chapter one).

My argument is that the silence exhibited by the Chewa girls who have come of age should not be stereotyped as passiveness as it could be a sign of deep understanding on their part (see chapter one). Understanding the Chewa AIKS would make the teachers look at some of these discourses which could be the true barriers to girls' education. The issues of minding various discourses found support elsewhere. Writing about the Chinese students, stereotyped as shy and reluctant to participate in discussions due to assumed difficulties, Trahar (2007:14) cautions that:

It may not be reluctance not to participate at all, but a belief that learning does not occur through discussion. Discussion should be after the acquisition of 'knowledge'. Silence, rather than being an indicator of a lack of engagement in the process of learning, or of passive learning, regarded pejoratively by many Western academics, is thus an active process, socially positive and beneficial to higher levels of thinking and deepening understanding.

In view of such findings, Breidlid (2007:1) could be right then when he observes that:

The global, hegemonic role of the Western educational discourse, world-view and knowledge systems has over the last years been questioned and critiqued by a number of scholars in Africa, Asia as well as the West.

It is this mixture of world-views and knowledge systems that the Chewa child has to take into account all the time when at school and in the community. The findings have also refuted views purporting that during the initiation ceremonies, girls are taught negative things that make some leave school. One of the women counselors (*Alangizi*) interviewed put it this way:

In initiation ceremonies, we do not teach them things that will spoil their virginity. We teach them how to keep themselves clean and hygienic. The sexual drills we teach them are for the benefit of their husbands when they are married in future. Even the songs that accompany these drills teach against promiscuity in a marriage. The girls are told to have sex only when they are married. (Tivwa December 05, Group one).

This respondent did not just refute the views given in the focus group discussion but also went further to give an example of one of the songs they sing during the initiation sessions. This song emphasizes the need for the girls of age to maintain clean morals, avoid promiscuity at all times, and maintain their virginity. This is how one respondent and a village counselor strongly voiced out her feelings:

Song

Kaluba yaye kaluba yaye kaluba kaluba wa abanda kaluba

*Oteti atanu popeleka moni wa mmanja, visumbali yai koma alume amnganda
akawera kaluba yaye kaluba, kaluba wa abanda kaluba*

Nindye nabani vikonde pakuliye awisi mwana aaaa

Translated into:

Kaluba (Name) yes Kaluba the daughter of Mr. Banda. Do not involve yourself in promiscuity but wait for your husband when he comes. Who am I going to "eat banana" with when the father to my boy child (or my husband) is not around.

(The same respondent disclosed that 'eating banana' is a euphemistic way of describing the act of having sexual intercourse). This view was supported by one respondent, a Chewa chief, who argued that the education given to girls in the Chewa AIKS was in stages depending on the ages of the girls:

People have a wrong impression about *chinamwali* (the initiation ceremonies for girls). The education for girls had stages to follow during the seclusion. There was the education for *Buthu* (*Buthu* is before a girl becomes of age and that for *namwali* (a girl of age now). No wonder we still see very old couples still going on strong together. It is because they were properly trained in these 'schools.' (Chief Mbangombe, 21, December 05, Group one).

The focus group discussion involving women counselors (*Alangizi*) did not just outline what is covered in these ceremonies, which corroborates with what the chief above said but also contrasted the Chewa AIKS methodologies with those used in schools on a similar subject of sex education:

We do not teach our girls about the use of condoms as they do in schools nowadays. Most of the girls who become pregnant at school are those who were not initiated in these ceremonies (Focus group discussion in chief Kathumba (Tivwa 31st December, 05, Group one).

The initiation ceremonies are aimed at training the girls, when they reach their puberty stage to look after themselves. We do not ask them to practice the drills we teach them before they get married. In fact, the sexual drills are for the benefit of the husband to be and not to be practiced elsewhere. That is why the day the girl is offered into marriage is the most crucial one. (Mulephele 30, December, 05, Group one).

In fact, in our Chewa AIKS, no girl was allowed to go into marriage immediately after the initiation ceremony. Remember, again, that the virginity of the girl would also be checked by the trainer (*Namkungwi*) on the day of marriage. Those who lost their virginity would not be allowed by the community to go ahead with the marriage arrangement. (Mutashe, 30, December 05, Group one).

Many of the views stated above have been cited by many scholars and researchers (see chapter two on gender section) as barriers for girls' education. One contentious issue here is that it is not possible to know whether or not all marriage counsellors are

aware of all these procedures. This is particularly so when we consider the inconsistencies that surround the practices of the Chewa AIKS on the economy of knowledge as argued by Thrift (1996) (see the critique to IKS in chapter four). I feel some of these practices could still be taking place without others knowing. The involvement of the traditional and local leaders from the Chewa AIKS in the designing and implementation of the formal school curriculum, as suggested by many respondents, may help the situation.

Nyau dance has been said to be against the promotion of formal schooling by some respondents. One participant in a focus group discussion put the blame of some children not making progress at school because of *Nyau* activities in the area. The respondent cited a boy who often stays away from school to attend to *Nyau* programs. The boy in question was said to be still in Grade 7 at 20 years of age. Not all the respondents shared this view. The four Chewa chiefs interviewed were very positive about *Nyau* as an asset to formal education rather than a barrier (see Chapter three for *Nyau* secret school and the ability to adapt to various situations). One of these chiefs had this to say about *Nyau*:

Through *Nyau* School our children were given the education needed for their everyday lives. *Nyau* is not for young people only. Even for an elderly person like me (chief). If I were misbehaving, I would be taken back to school (*Nyau*) and would come back a different person- very humble indeed. (Chief Mbangombe, 21st December, 05, Group one).

The revelation that even adults could be summoned for some 'refresher' training at the *Nyau* 'school' contradicts the notion that all adults are wise and can teach the young. Perhaps this is because no culture is static. The findings seem to show that the Chewa AIKS is not static but changes to suit the environment. (see chapter four for the ability of the *Nyau* secret school to adapt to various situations using masks). The research has outlined notable transformational changes done in the Chewa AIKS to support of EFA:

In the past many things were involved in these initiation ceremonies, but they have since been revised and those that were going to extremes have been done away with. Now we conduct these ceremonies and exclusions during school holidays so that school programs are not disturbed. (Tivwa 31st December, 05, Group one).

It is difficult to find out whether or not all the perceived 'extremes' have been done away with. More research and involvement of the elders in school programs may make them open up and disclose some of these 'extremes' and how they could be

done away with and who judges the levels of extremism. Despite these barriers from the Chewa AIKS to EFA, the majority of respondents still support the inclusion of the Chewa AIKS into the formal school education.

After looking at a number of findings from various respondents (see figure 31), I now present, in summary form, the attitudes and perceptions that the traditional chiefs, local leaders and elders (Group one) have towards Chewa AIKS, EFA and the schooling education, and those of the educationists and implementers of educational programs (Group two) on formal school education as a vehicle to achieve EFA goals, the Chewa AIKS and possibly about other IKS, in general. These perceptions are presented in a table form below and explained there after.

Table 12: Perceptions of ‘Traditional’ Leaders and ‘Educationists’ groups on Formal school Education, Chewa AIKS and EFA

Target Groups	Perceptions on the Chewa AIKS	Perceptions on schooling education and EFA
Traditional chiefs, elders and Local leaders (Group 1)	<ul style="list-style-type: none"> • Chewa AIKS must be integrated with the school curriculum. • The practical skills to be linked to income generating ventures. • Need to adjust or change some practices to promote formal schooling (See chapter six). • They must be involved in the running of the formal schools. • Have some social transformation changes e.g. Female chiefs, young men and women with university education appointed as chiefs, forbidding boys from herding cattle to go to school, initiation ceremonies being conducted during school holidays and discouraging early marriages among their subjects. 	<ul style="list-style-type: none"> • The majority consider school as a path to economic prosperity (more pronounced with respondents from the rural areas). • EFA must give jobs to all. • Loss of faith in schooling education for its failure to guarantee jobs • Current curriculum irrelevant and harmful to children and Chewa AIKS. • School authorities/ teachers/ own children do not value them and Chewa AIKS. • School education changes children’s focus from community to self. • Children lose respect for Chewa norms and cultural identity (Mwambo).
Educationalists and Policy makers and implementers (Group 2)	<ul style="list-style-type: none"> • Majority feel there is something (not all) that can come out of AIKS and make schooling meaningful and beneficial. • Some (very few) consider it a retrogressive idea to look back to AIKS for solutions to EFA challenges. • Many not aware of the ‘reforms’ going on in AIKS and still feel it is static and old fashioned in a global world. 	<ul style="list-style-type: none"> • The majority favour ‘localization of curriculum. • Measure quality of education with input ratios in school. • Few consider reference to AIKS a retrogressive idea. • EFA should give jobs.

The views presented in Table 12 are consistent with those in Table 13 and Figure 31. All have revealed that the majority of the respondents value schooling education, but only as a route to social mobility for their children and eventually for themselves as well. The views expressed by many respondents suggest this could be out of limited and primitive rural living, though this view is also shared even among the respondents from group two, majority of whom can be assumed to be affluent and leaving in urban areas. They still felt there was something that schools could get from the community in order to make that education relevant to their needs and that of the country.

Table 13 below presents the respondents' choices of models for the hybridization of the Chewa AIKS and the formal school curriculum.

Table 13 Sets of views from respondents

Numbers of respondents	Choice of model for the inclusion of the Chewa AIKS into the formal school curriculum	Views in support of the model chosen	Views against a given model
Majority (plus all the four chiefs) (41)	Mainstreaming/Integration of formal school curriculum with the Chewa AIKS.	<ul style="list-style-type: none"> • Both are useful for an ideal person with good character in society • Guarantees to jobs and high social and economic status • Practical and literacy skills are assured. 	<ul style="list-style-type: none"> • Difficulty to monitor. • AIKS will be swallowed up by other subjects. • Teachers' focus is on passing examination • False reporting • Syllabus already crowded.
Very few respondents (2)	Formal schooling going it alone.	<ul style="list-style-type: none"> • Social mobility for their children offers universal knowledge for the global village. • Retrogressive to look backward for answers to current problems • AIKS is rigid and preserves a culture of poverty. 	<ul style="list-style-type: none"> • Divorces pupils from their communities • Content and not performance based • Has become moral trap for producing 'failures'
No respondents (0)	A return to the Chewa AIKS an alternative.	<ul style="list-style-type: none"> • Even those strongly against some aspects in formal schooling did not think the Chewa AIKS alone could be an alternative. 	<ul style="list-style-type: none"> • Retrogressive idea • Not universal knowledge • Rigid and gender biased rules and proverbs. • Preservation of culture of poverty.

Details in the table are that the majority of the respondents supported the mainstreaming or integration of the Chewa AIKS into the formal school curriculum. Only two (2) respondents felt the formal school would go it alone. No respondent felt

the Chewa AIKS would replace the formal school and go it alone. This was despite many misgivings they had for the formal school education (see Table 8). Note that in the literature review, some researchers and scholars preferred a return to IKS or AIKS to continuing with the Western oriented school education. Even some respondents who also had misgivings for the Chewa AIKS (see Table 12) still favoured the integration of the two. One of the two respondents argued that the Chewa AIKS could neither be an alternative nor a supplement to the current formal school. However, he felt strongly that the current formal school education should be replaced. He argued that:

We need to look at alternative knowledge systems other than the Western one. Once identified, it must be harnessed. The status core now is that knowledge is only that from the West and alternative knowledge is ignorance. Look at various demarcations of knowledge and find out who identifies and defines it and for what purpose. I strongly feel that knowledge does not just come from books and computers; it comes from the full-bodied experience and interpretation of people's environment (Prof Mapapa 1, December 05, Group 2).

Although the respondent in the above quotation was one of the few suggesting an alternative knowledge system to the formal school one, the views expressed later in the same quotation suggesting that that alternative knowledge should relate to the people's environment and everyday experience seems to refer to AIKS again. Meanwhile, the hybridization of the Chewa AIKS and the formal school curriculum has been identified by the majority of the respondents as the alternative path to follow. However, my observation is that the few against the inclusion of the Chewa AIKS into the formal school curriculum are senior policy-makers and well-placed individuals in the Ministry of Education. This brings the issues of power relation and the elites who are "actors in policy decisions" (Cooper, 1989:88). Semali (1999) has revealed that failure by many intellectuals or elites to claim ownership of Nyerere's Education for Self-Reliance (ESR) program was one of the reasons that led to its downfall (see chapter three). However Chiwome *et al.*, (2000:243) give a reminder that the elites who exercise power are often reluctant to give it up and that:

Change can only be a reality if the impetus arises from the powerless; as they seek to do for themselves what the politicians, developing agencies and the [policy makers and elites] have not been able to do for them".

Suggested frameworks for the inclusion of AIKS into the primary school curriculum

There were many suggestions given by various respondents on the possible frameworks that would be followed to integrate the Chewa AIKS and the formal school curriculum. Many respondents used various terms to refer to the inclusion of AIKS into the formal school curriculum. These are 'incorporate', 'infuse', 'integrate', mainstream, 'bringing' or 'putting' them together' and 'hybridizing' them'. As discussed in chapter three, all these terms save 'hybridization'; are refereeing to 'a process' while hybridization refers to 'a product' of those processes. It is the incorporating, integrating, mainstreaming, including, of the Chewa AIKS into the school curriculum that is hoped to produce a hybridized curriculum (see Figure 13).

Three frameworks were suggested by various respondents on the processes leading to the production of a hybridized primary school curriculum. The frameworks suggested are as follows:

1. Integration/ mainstreaming Chewa AIKS or Chewa community studies into the school curriculum.
2. Establishing an independent department with trained manpower to teach and manage the Chewa AIKS or community studies.
3. Teach the Chewa AIKS/ Community studies through the already established official Zambian languages.

Integration/ mainstreaming

The integration of the Chewa AIKS was proposed and supported by a number of interviewees and participants in focus group discussions by teachers. In one focus group discussion consisting of seven teachers, four voted for the integration while the remaining three went for establishing a department to co-ordinate the teaching of the Chewa IKS. In the case of the four Chewa chiefs, local leaders and elder interviewed, the Chewa expressions used would indicate which frame work they were suggesting. Reasons for opting for the integration/ mainstreaming framework included easy coverage of the content matter without demand for extra time and teacher, does not complicate time tabling as AIKS becomes part of the core subjects, easy to assess as the framework for assessment is already there in the subjects accommodating the Chewa AIKS, quicker way of doing things as you do not waste time and resources

establishing a new department and train new teachers. Some of these views are captured in some of the quotations below:

I would like to support an integrated approach. All the core subjects have aspects from local knowledge. Teachers can integrate many aspects in such subjects as Social studies, science, Mathematics, Religious knowledge, History and home economics. Many things from the Chewa AIKS can be integrated. In education we believe that learning is from the known to the unknown. What the pupils know from the community is the known and the school subjects are the unknown (Plan International, Education Coordinator, Malambo, 6 February, 06, group two).

Same teachers teaching various core subjects can find room to squeeze the Chewa AIKS in their teaching. That way it could be easier to cover the Chewa AIKS without any extra cost because you are using the same teachers and the same resources and it is also time serving" (Focus group discussion T2 Mphangwe Basic School, 1 February, 06, group two).

I support the mainstreaming of the Chewa AIKS into the curriculum because our timetable are already too crowded to accommodate new subjects and you have all the teachers in the school handling the Chewa AIKS (Mr Mwira, Kaingo Basic School, 4/02/06. Group two).

If the Chewa AIKS are mainstreamed in the already examinable subjects, it would be easier to include aspects of it in the examination (Stella Banda, *Chakumba* community school, and 31/01/05. Group two).

It is faster to mainstream the Chewa AIKS in the existing core subjects for easy teaching and assessment (Susan, *Tikondane* Community School, 4/02/06. Group two).

Rather than only using integrating and mainstreaming, respondents used a variety of other words to mean one and the same thing such as, 'infusing', 'including' 'adding or 'putting them together.' The main worry teachers have is pupils passing the examination.

Establishing an independent department with trained manpower

There were some respondents who felt that an independent department was to be established to co ordinate the teaching of the AIKS or the community studies (see chapter three). The following were some of the reasons advanced in support of this framework:

It is difficult to monitor these programs when they are mainstreamed because they are swallowed up by the existing subjects. You get very good reports from schools on the integration but very little is done (R Zulu inspector of school).

If you have particular people looking at Chewa AIKS, it is easier to check what they are doing or not doing (Teacher 5, F.G.D Mphangwe Basic School, 02 February, 06).

If you do not establish a department for Chewa AIKS, it may not develop its own literature (Teacher 2, F.G.D Mphangwe Basic School, 02 February, 06).

The issues raised in the quotations above include books and material production, training of individuals to 'teach Chewa AIKS', and congested timetables, with little time to cover even the existing subjects. While the idea of teaching the Chewa AIKS has been refuted in this thesis as pupils already learnt it informally but may not know or have forgotten, teachers will still need to have the basic knowledge of the core themes of the Chewa AIKS in the curriculum to be covered.

Teach the Chewa AIKS/ through the seven official Zambian languages. (In this study Chichewa/ Nyanja language

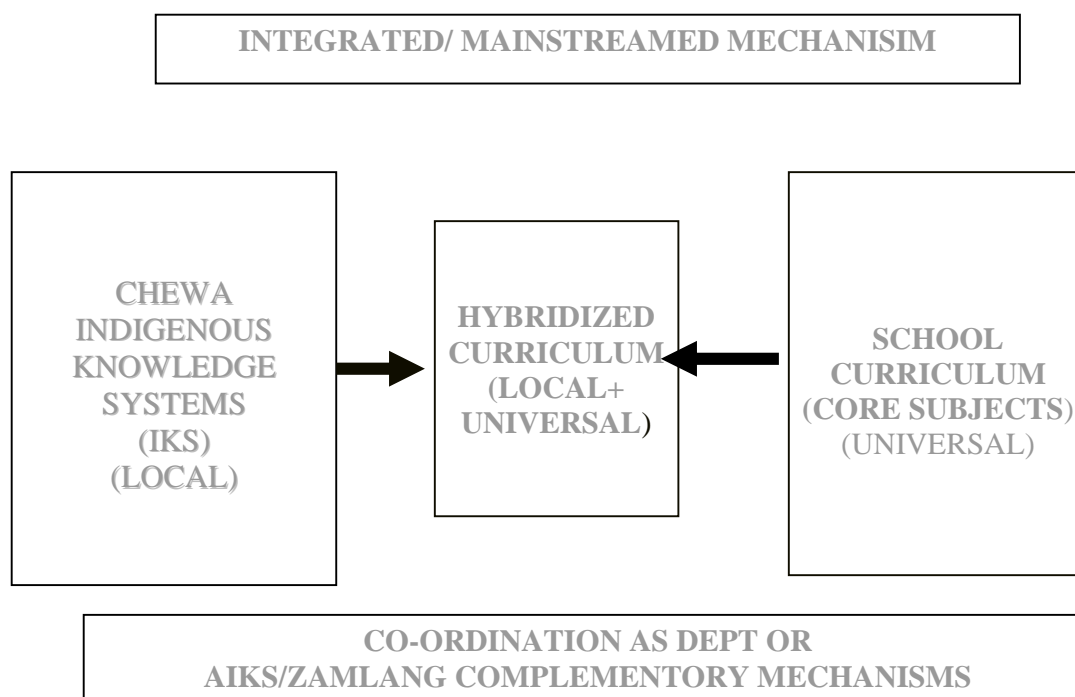
There were also some respondents who proposed teaching the Chewa AIKS through the already established Zambian languages, and in this case *Chichewa* language. These respondents argued that there was a direct link between the Chewa AIKS and the Zambian language (*Chichewa/ Chinyanja*) pupils and teachers were using in most of their everyday communication. In support of the use a Zambian language, *Chichewa*, as vehicles for the Chewa AIKS in schools. Two respondents gave the following corroborating views in defence of his argument:

We can easily assess the Chewa AIKS through the Zambian language (Ms Malambo, Plan international, 6/02/06, Group two).

I think one biggest drawback is the poor teaching of the Zambian languages. Teaching in and through Zambian languages is still stuck in the 16th century (By email- on line 15/08/07).

I support the views expressed above. My argument is that in Africa now, a lot of money is spent on research on the use of African Languages or mother tongue as languages of instructions (Brock-Utne, 2000; 2007). Zambia has been piloting the use of mother tongue or a language familiar to a child as the one to be used for initial literacy. I feel that money could better be used to develop the materials and books in those languages and training teachers who should teach them.

Figure 34: Hybridized curriculum frame work



However, the general feeling among many respondents was the need for the government to develop a policy framework for AIKS, which would also cater for the Chewa AIKS. One respondent drew examples from elsewhere on the need to have an IKS policy-framework. His concerns are captured in the quotation below:

What is very important is the link among all stakeholders. Our friends in South Africa have put up a legal framework and established departments of IKS in various ministries and universities. This is what should be done so that IKS could be documented and be supported by a policy framework. They also have a research institute looking into AIKS. That way, they can feed the education system with the AIKS needed to enhance the quality of education being offered (Professor Mwanza, 09, January, 06, Group 1).

While there is so much assumption about how South Africa has advanced with the integration of the IKS into their school curricula, the situation on the ground does not seem to be any better than that in Zambia. Even the revised curriculum is said to be paying lip service to IKS. It is still firmly grounded in Western epistemologies as confirmed by Ntuli (2002:56):

Our education system seems to move farther away from indigenous knowledge. There is no attempt at any level to examine the indigenous knowledge systems awareness of the essential interrelatedness of all phenomena -physical, biological, social and cultural.

I feel the establishment of a policy-framework on IKS in general is the underpinning issue that needs attention. On the three frameworks suggested, I would go for a combination of two frameworks i.e. the integration of the Chewa AIKS and the formal school curriculum and the inclusion of some practical or occupational skills embedded in the Chewa AIKS as new subjects in the curriculum. Some of the themes in the Chewa AIKS do not necessarily need the inclusion of a new subject as they can be covered within the existing relevant core subjects in the curriculum e.g. Science, Biology, Social studies, Religious knowledge, Health education, Agriculture and many more. Many authors (Warren *et al.*, 1996; Kroma, 1995) who have discussed the contextualization of education and the inclusion of IKS hold that IKS should not be made a separate subject but be integrated into the existing curricula. However, I see the need to introduce practical or occupational skills as new subjects on the curriculum e.g. farming, gardening, food processing and preservation, basket-making, hand crafts, home economics, tailoring, and many others. While piloting these frameworks would be a good idea, we need to bear in mind that already, Zambia, like many other developing countries, has had so many pilot programs that have not piloted anybody as also observed by Watson (1993:100) on pilot projects in Africa:

The landscape of the Third world today is littered with the carcasses of the pilot projects that failed to pilot anybody anywhere.

I would also agree that it does not seem to make a lot of sense to be thinking of teaching the AIKS or the Chewa AIKS in Chichewa language when it is poorly taught or not even taught at all. The creation of an autonomous department to handle and coordinate the teaching of the AIKS may sound to be a viable one, but currently, there is poor staffing in all the schools, especially in rural areas. This has been worsened by the International Monetary Fund (IMF) and World Bank action of imposing conditions on Zambia not to employ more civil servants (see chapter two).

Possible interventions to the mainstreaming of the Chewa AIKS into the school curriculum

The findings in this research have revealed that some respondents have indicated the need to acknowledge, and reward those perceived to be the custodians of the Chewa AIKS. Documenting the findings in AIKS and sharing the knowledge with other institutions have also been identified as some aspects that could enhance the

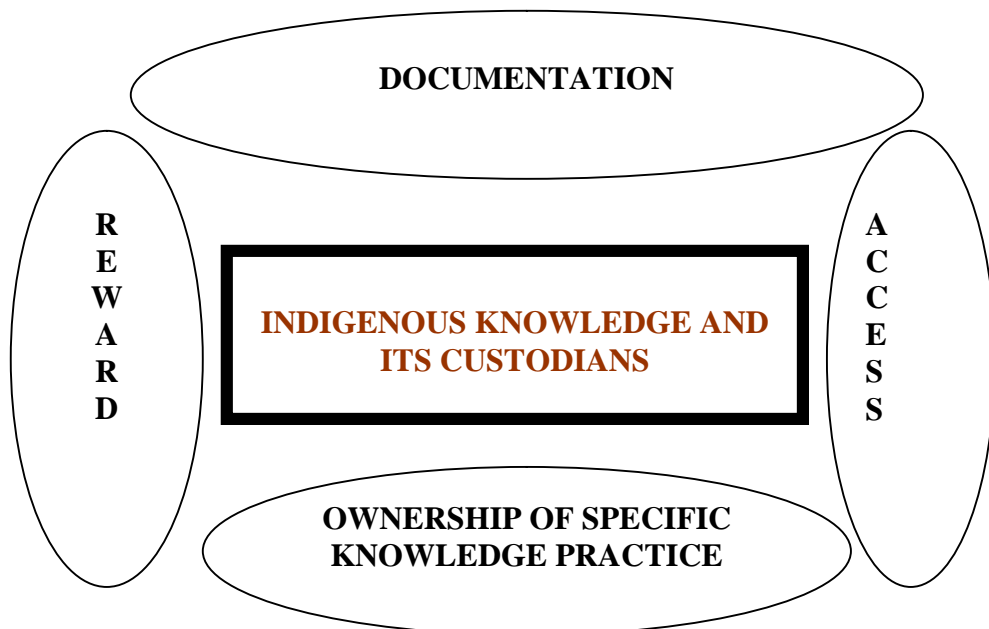
integration of the Chewa AIKS and the formal schooling curriculum. Some respondents corroborate with those quoted earlier on this chapter on this issue:

These people who hold such bodies of knowledge must be acknowledged in one way or the other. The knowledge they hold and the various skills they have must be recognised through some certification so that rewarding such individuals becomes possible. (Professor Msambacheme, 09, January, 06, Group 2).

We need to create mechanisms that should open our AIKS to international research institutions. This can happen if our local researchers do their work in AIKS and publish their findings. That way AIKS will also be protected as it will be documented and those with special skills and knowledge identified and possibly rewarded in one way or the other. (Professor Mwanza, 09, January, 06, Group 2).

While it is true that the Chewa AIKS is likely to be lost if it is not documented, it is a challenge to know who has the powers to choose what should be documented and who should be rewarded. I support those respondents who said they would ask for payment if they were to share their special knowledge and skills with pupils. This step would commit them to their work. The four interventions, documentation, reward, ownership of specific knowledge practice and access to other institutions and international bodies mentioned by many respondents have been presented diagrammatically in Figure 35 below:

Figure 35: Possible Interventions to the mainstreaming of the Chewa AIKS



However, these interventions seem to be under threat from globalization (see chapter four).

Other barriers and challenges

The findings have also shown that even if the hybridization of the Chewa AIKS and the formal school curriculum was to take place, there were other challenges that some respondents felt would still hinder the full achievement of the EFA goals. These are little investment and high poverty levels.

Little investment in education

Some respondents feel that there is little investment on the part of government on education. Two senior education officers at the Ministry of Education (MoE) said the following:

We need massive investments in education. We need 30/40 % of government expenditure on education. As to now, Zambia is the least in the region as we spend only 17/18% of government expenditure on Education

We have made progress in access but progression, completion and achievement rates are very low. People feel satisfied when they see their children going to school. What they do at school or come up with does not matter at all. We need more funding.

The findings have shown that more funding is needed. Integrating the formal school curriculum with other forms of knowledge suggested by this study require more funding.

High poverty levels

As stated in Table 1, Zambia is one of the poorest countries in the world. The poverty levels are very high especially among the rural people who form 60% of the Zambian population (Lungwangwa, 2001; Carmody, 2004). No wonder then that some respondents feel that the high poverty levels in the country make some parents unable to send their children to school. Such parents are likely to be preoccupied with achieving daily needs in order to survive rather than worrying about the millennium goals. The argument given by one respondent in support of this view is that poor nations are preoccupied with achieving the very basic necessities of their people rather than worrying about the millennium goals:

Can countries that are below the poverty datum line and fighting to qualify for Highly Indebted poor Countries (HIPC) talk of achieving millennium goals or survival goals? (Prof. Mapapa, 11/01.06. Group two).

Even in situations where free education has been introduced by the government (Carmody, 2004), schools still charge their pupils using other terminologies and

sometimes such 'fees' are even more than the abolished ones (Kelly, 1999; Carmody, 2004). Boarding schools, which cater for many rural pupils, as there are very few day secondary schools, have maintained the boarding fees. Many parents are not able to raise money for such fees. Carmody (2004:66) reveals that:

A survey carried out in poorer sections of Lusaka in May 2003 among the parents, teachers and administrators found that while in most cases school and Parent Teachers; Association (PTA) fees have been abolished, and there are additional costs which many cannot afford.

Conclusion

The findings in this chapter have revealed that it is not possible for Zambia, and the Chewa people, in particular, to achieve any of the EFA goals by 2015. The chapter has revealed that there is a gap between the formal school and the Chewa Indigenous Knowledge Systems (Chewa AIKS). The chapter has unveiled some factors perceived to be widening this gap. These factors are the perceived differences and sometimes contradictions between the school and community cultures; different discourses and purposes of education, schooling; learning, and literacy between the Western education paradigms followed in the formal schools and the local ones followed by the Chewa people; lack of involvement and collaboration among all the stakeholders, especially the traditional chiefs and local leaders and elders (see figure 21) in the designing and implementation of the curricula; the perceived absence of practical or occupational skills in the formal school curricula; low and sometimes absence of preference given to vocational subjects that could foster career building in the primary school curriculum; non-use of the perceived indigenous knowledge pupils bring to the classroom, lack of the Chewa AIKS in the textbooks used and many parents and children becoming disillusioned with the formal school education for not giving jobs

The findings in this chapter have shown a consensus among various respondents from groups one and two (see Figure 30) to go for the hybridization of the Chewa AIKS and the formal school curriculum. The contentious issues revealed by the findings are that EFA focuses on one form of knowledge (global knowledge) and not local or indigenous knowledge. It hopes to achieve its goals through one path (formal schooling) and ignores other paths (informal and non-formal education). The chapter has revealed that the practical or occupational skills embedded in the Chewa AIKS would introduce to school curriculum more income generating subjects that could promote entrepreneurship and apprenticeship activities. The Chewa AIKS would also

mould the pupils into well cultured individuals of good character and endurance. However, the contradictions revealed are that the practical and occupational skills embedded in the Chewa AIKS are considered inferior and undesirable by both parents and pupils. While the Chewa AIKS is expected to mould pupils into well behaved and proud of their identity, the school changes their attitudes and make them consider their Chewa AIKS inferior. The chapter has revealed that a small number of respondents were for the formal school to go it alone and offer universal knowledge for a global village. The findings have also shown that a return to the Chewa AIKS as an autonomous alternative to formal school would neither work nor benefit anybody as it does not guarantee desirable jobs either. However, the hybridization of the Chewa AIKS and the formal schooling seems to centre on the understanding that the practical skills embedded in Chewa AIKS may promise a little bit better life in the event of formal school failing to give jobs.

The chapter has revealed three possible models of hybridizing the Chewa AIKS and the formal school curriculum:

1. The mainstreaming/integration mechanism,
2. The co-ordination and teaching of the Chewa AIKS through Chichewa/Chinyanja Zambian language
3. Establishing an autonomous department to teach the Chewa AIKS

The mainstreaming/integration mechanism was the most popular among the respondents. Finally documenting the Chewa AIKS, acknowledging and rewarding the custodians of special traditional skills and knowledge, and sharing that knowledge with other institutions, supported by an indigenous knowledge policy framework were identified in the chapter as appropriate interventions to a sustainable hybridization process. These findings are supported by relevant literature on the hybridization of the formal school curricula and other forms of education or knowledge.

The next chapter presents the conclusions of this research, recommendations, implications of the results of the research and contribution to new knowledge and some suggestions for future research and interventions, and my personal reflection on the study.

CHAPTER SEVEN

CONCLUSIONS

Introduction

This final chapter has attempted to show that the research questions raised in chapters one and five have been addressed and achieved. The chapter has endeavoured to fill in the gap that has been explicitly or implicitly exposed between the Chewa AIKS and the formal schooling education. It begins with a summary of the main research findings and the recommendations. Implications of the results of the research and its contribution to new knowledge are later presented. This is followed by some suggestions on areas for future research and interventions. Some contradictions and dilemmas revealed by this research may require further research and more academic debates on them. The chapter ends with the researcher's personal reflections and claim for PhD for this thesis.

The main research findings

As a reminder to the reader, this research is looking at Education for All (EFA) and the "African Indigenous Knowledge Systems (AIKS)" with reference to the Chewa people of Zambia. The research was an investigation of whether the Chewa AIKS could integrate with the formal school curriculum to enhance the achievement of the EFA goals (see Figure 1). The summary of the main findings are presented below following various themes discussed in chapter six and guided by the research questions.

Access versus quality and relevance of formal schooling education

The research question in this section was: *Can Zambia and the Chewa people, in particular, achieve the EFA goals by 2015?*

The findings of this research corroborate with the literature review (Kelly, 1999; UNESCO, 2007; McGrath, 2008) and have revealed that Zambia and the entire Sub-Saharan Africa may not achieve any of the Education for All (EFA) goals by 2015. The focus for EFA is not so much on the quality but the quantity of education which is often registered by the increase in years of attending school and obtaining certificates for job allocation, as discussed in chapter two. The research has further

revealed that this quantitative aiming of access has led to massive drop out and aggravated poor progression and achievement rates (see Table 2). The research has identified some contradictions in the discourse of quality education. The majority of respondents seem to measure quality of education by its ability to provide white-collar jobs. The notion that all who gets this education must find jobs was shared by majority of the respondents. This could be entrenched in the informal learning that goes on within the community as suggested by Rogers (2004a). UNESCO and the formal school, on the other hand, use ratios of what is in school (input) to measure quality of education being offered. These 'failures' in school once in the community are labelled as 'failures in life.' Parents whose children drop out or find no jobs after school feel cheated and frustrated with formal schooling and find EFA unprofitable.

The findings have further shown that vocational or occupational training programs organised for the so-called 'failures' are also labelled as 'programs for failures.' The findings have identified the need for the Ministry of Education to introduce post-primary school educational programs within these primary schools so that pupils who do not make it to secondary schools get some vocational and occupational skills. Such skills could help pupils get involved in small-scale entrepreneurships. There may be need for government to sensitize the community on other roles of formal school education e.g. civic roles so that they broaden their understanding and appreciation of formal school education beyond the unachievable one of guaranteeing white-collar jobs.

The inclusion of the Chewa AIKS into the formal school curriculum

The main research question in this section was: *Can the Chewa Indigenous Knowledge Systems be hybridized with the formal school education to enhance the achievement of the EFA goals?*

This research has revealed that integrating the Chewa AIKS with the formal schooling education could enhance the achievement of the EFA goals. Even respondents with strong reservations about the formal school education were for the integration of the two forms of knowledge (see chapter six). No respondent was for the idea of the Chewa AIKS being an alternative to formal schooling. However, two respondents and policy makers in the Ministry of Education favoured school education going it alone. Reasons that may have influenced these choices were many (see Tables 12 and 13).

This research has identified a number of areas where the Chewa AIKS and the formal school education would complement each other. It has also identified practices among the Chewa people that would hinder the achievement of EFA, especially if the Chewa AIKS continued to be ignored by formal schools. From these findings one conclusion we could draw out is that the hybridization of Chewa AIKS and the formal school curriculum would enhance the achievement of EFA. However, more appropriate forms of education should be developed out of the Chewa AIKS and the formal education to form an integrated curriculum. One dilemma to this integration is centred on power relations. With no educational structure in Chewa AIKS that are acknowledged by the formal school, there is a great possibility that the latter will be the dominant group with the cultural capital to define what knowledge is legitimate enough in Chewa AIKS to become part of formal school. Another dilemma is that the holistic aspect of Chewa AIKS does not match the way knowledge in western schooling is broken down, decontextualized and taught in precise fragments. Even with all these constraints, this research still argues that an integration of the formal school and Chewa AIKS could benefit EFA.

Organisational issues

The research question was: *How organised and inclusive is the Chewa AIKS to enhance the achievement of Education for All (EFA) goals?*

The research has revealed that the Chewa people have systemic organization structures starting with the Chewa Royal Establishment to the subordinate chiefs. However, these have never been considered to be educational structures by the formal schools and therefore have never been used as so. The research has revealed that the paramount chief Kalonga Gawa Undi of the Chewa people is a university graduate and therefore a hybrid of formal education and Chewa AIKS. Some of his subordinate chiefs are young people with secondary school education (see chapter six). Field notes indicate that many respondents were proud of the university qualification and the job of high status which he abandoned to become the paramount chief of the Chewa people. Coupled with their specific roles to play, these traditional leaders could easily fit in the various committees of the Ministry of Education at all levels and contribute to curriculum design and implementation. The research has also shown that there are both male and female Chewa chiefs. The findings have shown that these female chiefs

and *Nyangu*, the queen mother, could be used as role models to promote girls' education and women's development. The findings have shown that they could influence some changes of on gender biased practices. From the above finding, two conclusions could be drawn. Firstly, there are some social transformational changes taking place in the Chewa society. These changes include the appointment of young men and women with high formal schooling educated as chiefs. This is a significant change that contradicts the Chewa norm of treating old age as a symbol of wisdom and knowledge (see chapter four). The appointment of female chiefs, though few and none in Katete district, is a new development as even the title '*mambo*' for the chiefs is masculine, suggesting that in the past, Chewa chiefs were males only. These societal transformational changes are supported by the literature review that says that culture is not static (Warren *et al.*, 1996; Sillitoe *et al.*, 2005). One conclusion we can draw from these findings is that the Chewa AIKS looks organised and the formal school could dialogue, negotiate and communicate and be able to include and exclude knowledge in the school curriculum.

The school and the Chewa community relation

The research question in this section was: *Are there any perceived barriers between school and the community that the hybridization of the Chewa AIKS and the formal school curriculum could try to remedy to enhance the achievement of the EFA goals?*

The research has identified the gap between the school and the Chewa community cultures and has revealed that the pupils are the main victim of this gap as they have to negotiate between the two cultures when they are at school and in the community (see chapter one). The study has revealed a number of things that widens this gap such as: perceived irrelevant curriculum, low emphasis given to practical, occupational and vocational subjects for future career development, no community involvement in the provision of education; non-use of Chewa AIKS pupils bring to school, school education not giving jobs and absence of Chewa AIKS in school text books. The research has also found some perceived barriers from the Chewa AIKS such as: some negative practices in the initiation ceremonies for girls (*Chinamwali*), practice of children's ownership by an uncle, negative proverbs against girls and women, dominant male structures like all the chiefs' counsellors are male and the queen mother to *Gawa Undi* is limited to the palace and denying a group of people

information based on gender and age (see Table 11). The research has concluded that the hybridization of the Chewa AIKS and the formal school curriculum would help to reduce this gap. The research has established that the integration would make parents become participants in the learning of their children so that at the end we have what Odora (2000) calls 'learning communities' discussed in chapter two. This could be through the apprenticeship programs or using the elders with special skills in the evaluation of those skills in the school. That way, pupils would learn from school and community. Through the integration, parents could participate in curriculum designing and implementation, currently reserved exclusively for the so-called "experts" (Sillitoe *et al.*, 2005) with powers to make decisions for the powerless. Such findings are in line with what Vygotsky (1979) proposes that parents should be participants in the learning of their children. This research has also identified the need for all stakeholders to examine the school and community cultures in order to broaden the understanding of how "school" knowledge can intersect with community knowledge. As suggested in the frameworks and models discussed in chapter three (Communication framework (Figure 17); Systemic hybridization framework (Figure 13); Culturally-Based Curriculum Model (Figure 15), Ice berg cultural model (Figure 9) and stages leading to the hybridization of different forms of knowledge systems (Figures 10-14), it is only by bringing the two forms of knowledge together through dialogue, research and effective communication involving all stake holders (Figure 21) that these challenges and barriers would be addressed. The main conclusion that can be drawn from these findings is that a critical understanding of the weaknesses and strengths of both the Chewa AIKS and the formal schooling system by all stakeholders could be the prerequisite to the production of a negotiated curriculum that may be attractive to both parents and pupils and support EFA.

The Chewa traditional chiefs and local leaders and elders

The question in this section was: *What roles can the Chewa traditional chiefs, local leaders, elders, and others perceived to be custodians of the Chewa AIKS such as traditional healers and traditional birth attendants (TBA) play in the designing and implementation of the school curricula in their areas?*

The research has shown that the traditional chiefs and local leaders and elders could act as bridges between the perceived old and new knowledge systems. The findings

have revealed that there is a hierarchical channel of communication in the Chewa AIKS. The village heads, act as "eyes" of the chief) (*Maso ya mfumu*) and report to their chiefs who are "eyes" for the paramount chief Kalonga Gawa Undi (*Maso ya Kalonga Gawa Undi*) meaning they in turn report to the paramount chief. This research has suggested that such reporting arrangements could also include children not enrolled in schools, absenteeism, early marriages, child pregnancies and children of school going age not in school but herding cattle or selling second hand clothes. The findings have shown that once informed, the chiefs have powers to summon to the palace, both the parents and the owner of the cattle to be reprimanded, and possibly be punished. (see chapter six). Thus, the research has suggested that the chiefs and other local leaders be members of the various educational boards as suggested by Sillitoe *et al.*, (2005).

This research has revealed that there are specific roles and responsibilities various chiefs were expected to play as per the Chewa Royal Establishment arrangement. (see chapter four) This arrangement would make it a bit easier to attach them to various educational committees. The research has pointed out that as members of the educational boards or committees, they would be in a better position to facilitate in the identification of individuals within their chiefdoms who would support the teaching of the identified practical skills and traditional wisdom in the primary schools. The research also revealed that there were sights where black smithing and iron smelting (*vipala*) for manufacturing tools were taking place before they were disturbed by the colonial governments. This could form part of history lessons. Although there are some reservations that traditional leaders and elders were too rigid to affect any change, other findings have shown that the school system is equally rigid. However, this study has shown through various frameworks that dialogue between the two could establish a common ground or an intersection that can expand further as suggested in Figures 13-15). The conclusions we can draw from these findings are that firstly, the traditional chiefs have powers over their people and their position cannot be ignored in any developmental program. Secondly, the traditional chiefs and local leaders are in favour of educational reforms and can bring change even within the Chewa AIKS itself e.g. making and implementing the bylaws to prevent school going children from herding cattle, stopping early marriage arranged by the church as discussed in chapter six. The dilemma this research has found is that there are some pedagogical,

instructional and communicative implications that may hinder the free flow of information. For example, the findings have shown that the Chewa chiefs cannot be interjected or opposed in a discussion as what the chief has said are 'truths.' Perhaps the appointment of young men and women, with secondary school or university education as chiefs (hybrids) may change some of what some people have called rigid norms.

The practical or occupational skills

The research question in this section was: *What are some of the indigenous forms of knowledge that emerge from the Chewa AIKS and can enhance the formal school education?*

The research has shown that formal schooling education places low emphasis on practical or occupational skills (see Figure 27). This research has revealed that integrating these task-based and performance oriented subjects with school curriculum may motivate and possibly foster career building among the pupils. The assumption is that these subjects would add an economic relevance to the curriculum since they are income generating. One of the key finding of this research is that the Ministry of Education must adopt a model of an education reform that must aim at integrating the primary school curriculum with pupils' indigenous knowledge. The findings have shown that such a hybridized curriculum would make primary school education not a mere prerequisite for secondary school education but could be an end in itself, producing local entrepreneurs as Nyerere (1968) had visualized in his education for self-reliance (ESR) (see chapter two). The research has also revealed that the practical and occupational skills embedded in the Chewa AIKS should be linked to the income generating ventures through entrepreneurship and apprenticeship programs if they are to attract parents and pupils to formal schooling education. However, it was also very clearly expressed by the majority of respondents in corroboration with the literature review that the practical and occupational skills were brought in as a solution to lack of employment and not out of love for them for they are generally considered skills that offer occupations for the uneducated and therefore inferior. The vocational subjects are also given a low preference, especially in primary schools and yet UNESCO member countries have been encouraged to give these vocational education subjects a high priority. The study has revealed some weaknesses with vocational

subjects. Like practical and occupational skills, vocational subjects do not offer job opportunities desirable to many parents and pupils who want white collar jobs which carry more status and desirable economic prospects (Foster, 1965; King *et al.*, 2002). They could also foster social and gender inequality as more pupils from poor background would find themselves taking these subjects and with fewer girls. Finally, the conclusion we can draw from these findings is that practical, occupational and vocational subjects can still be attractive enough to motivate pupils and help them identify a future career even if this could be a livelihood of last resort. With so many pupils who do not proceed to secondary education, this could open a way for post primary skills training through non formal education.

Use of the Chewa AIKS in local agriculture pupils are perceived to bring to school

The research question in this section was: *Do children bring to the classroom any indigenous knowledge systems and if so do teachers make use of it?*

The research revealed that pupils bring to classroom knowledge in counting, family planning, farming and gardening and in many other areas but teachers do not help pupils to bring these skills out and use them. They just follow the textbooks and teach what they think will be in the examination. The research has also shown that teachers find it difficult to tap the indigenous knowledge from the learners' everyday life to schoolwork as they themselves are not familiar with the Chewa AIKS. As argued in chapter six, Chewa AIKS is not systematically documented so that it is 'taught' in schools along side the formal (modern) education and technology. The findings of this research suggest that the integration of the Chewa AIKS and the formal school curriculum would make an interface between school core subjects and the Chewa AIKS. Street (2001:14) holds that "good educational practice today requires facilitators to build on what the learners bring to the class." The research presented evidence (see Table 10) of how children growing up in a community rich in Agriculture must be influenced by it and such children would bring to school conception from their indigenous knowledge (see Figures 27-28). The findings suggest this could motivate pupils, reduce drop out rates and enhance the achievement of EFA goals especially goals 3 and 6 (see Figure 1). In summary the research has revealed two key things. The first one is that if practical or occupational skills embedded in the Chewa AIKS are to get public recognition, they must be fitted into

the national examination regime. This is because the majority of the respondents believe that examinations and certificates are the most important thing about school. The second one is these practical skills must be linked to the money economy even if this is the last resort since white-collar jobs associated with academic subjects are still the preference by both pupils and their parents as discussed in chapter six.

Transferability of the accumulated knowledge

The research question in this section was: *How is the Chewa AIKS accumulated, stored, transmitted and assessed?*

The findings have shown that Chewa AIKS could be stored ,accumulated and even transmitted in proverbs, stories, traditional games, ceremonies, dances, experiences that are shared, norms, taboos, songs and in practices that are included in everyday people's life . The findings have revealed that the use of proverbs, stories and other methods and techniques mentioned above could motivate pupils in class. However, the findings, supported by the literature review on IKS in general (Herbert, 1993; Shiva, 1993) have revealed that including IKS in classroom will always prove to be a challenge to teachers as IKS is not always visible and sometimes not easy to understand as it is incorporated in people's way of life.

The research has further found out that that much of the Chewa AIKS is passed on through the cultural system of apprenticeship. A number of non formal and formalized trainings and learning seem to take place in the Chewa AIKS. Elders are also perceived to be proprietors of Chewa AIKS. It is in this line that this study has suggested that the involvement of elders and traditional and local leaders in curriculum designing and implementation would extend the apprenticeship mode of passing knowledge even to classroom, where some pupils become apprentices to the skilled people. The study assumes that such a step could lead to career development among pupils using their immediate environment and local resources. The research has further revealed that there may be need for the Ministry of Education to come up with mechanisms of rewarding elders and traditional and local leaders involved with the school programs as a way of acknowledging their skills. One weakness the findings have revealed is that while these occupational skills could offer alternative self- employed jobs, many parents and children consider such jobs inferior or no

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nchito za malebala as they are called in *Chichewa* language when referring to 'blue-collar jobs' done by the uneducated and unskilled labourer.

Entrepreneurships with the income generating subjects from the Chewa AIKS

The research question is: *In what other ways can the Chewa AIKS be used?*

The research has revealed that without linking these practical and traditional skills embedded in the Chewa AIKS to the money-economy through entrepreneurship, the hybridized curriculum would not act as an 'attractor' to parents to send their children to school. The argument advanced by this research is that the Chewa AIKS must be developed to the level where it can contribute to the economy of the country if its integration with the formal schooling education is to be appreciated by the community. One key thing we can draw from these findings is that practical and occupational skills embedded in Chewa AIKS should have economic values if pupils and parents are to appreciate them. There may be need to sensitise the Chewa community on the role of formal education and that it serves to give someone the abilities to do the jobs better but not necessarily to give jobs.

The research has further found out that *Nyau* dance could be an income generating activity and if it were part of the school syllabus; its entrepreneurship aspect would act as a motivating factor in encouraging children to continue with school and specialize in it for commercial purposes (see chapter six). More research is needed to find out if *Nyau* dance could be part of the school curriculum. From these findings, we can draw one conclusion that Reynar (1995:288) arrived at that "if indigenous knowledge [practical skills are] is to be of value in the development process, it would appear appropriate to conclude that it will be through the creation of wealth and not for mere cultural preservation.

Linkages and collaboration among all stakeholders

The research question in this section was: *What role do various stake holders play in the provision of education to all?*

The findings have revealed that there is very little collaboration among stakeholders on the provision of education for all. The traditional and local leaders are not involved in the designing and implementation of the formal school curriculum. Their input in such educational matters is often assumed by the 'education experts' the curriculum

developers (See the critique to the pilot program on 'community studies' in chapter three) Sillitoe *et al.*, 2005; Pottier *et al.*, 2003). This research has shown through various frameworks (Barnhardt *et al.* 2005; Sillitoe *et al.*, 2005; Adedipe, 2004) that there is no pre set curriculum that can work well as curricula should be negotiated by all stakeholders (see Figure 21). The non-governmental organizations (NGOs) are also not consulted, especially by the curriculum developers, even when they are involved on the same program. Teachers are themselves not well vested in the Chewa AIKS and their main concern is to teach for examination. This research has established that if the Chewa AIKS is to get public recognition and be taken seriously by pupils, it must be fitted into an examination regime as propounded by Warren *et al.*, (1996). There may also be a need to shift away from the current teacher-centred methods of instruction which are based on rote-learning not compatible with the context-based AIKS.

This research has shown that dialogue, wider consultation and research are important in work dealing with the integration of IKS and the formal school curricula as explained by Sillitoe *et al.*, (2005) (see Figure 17). One contradiction identified by this research is that EFA focuses on global knowledge and not on local or indigenous knowledge and yet indigenous knowledge system is one of key action themes identified by UNESCO in the UN Decade for Education for Sustainable Development (UNESCO, 2003).

Models of hybridization and pedagogical implications

The research question in this section was: *What could be the possible frameworks of the proposed hybridization of Chewa AIKS and formal school curriculum?*

The findings in this research came up with three possible models of hybridizing the Chewa AIKS with the primary school curriculum and these are: (a), integration / mainstreaming the Chewa AIKS into the formal primary school curriculum, (b), establishing an independent department that would coordinate and teach the Chewa AIKS, and (c), mainstreaming Chewa AIKS in an already established Zambian language, Chichewa. The most favoured one was the first one and reasons were that it is cost saving as no additional teachers are required though difficulty to monitor. The second favoured one was mainstreaming the Chewa AIKS into the Chichewa languages already established in schools. The main weakness the research has

identified with this approach is that currently these languages are poorly taught and have limited teaching materials. The Chewa AIKS would share the same low and inferior status the Zambian languages have. Above all, the research findings have revealed that it is not beneficial to study these Zambian languages especially at primary school level where they are not even counted as passing subjects to secondary school (Banda, 2002). The least favoured model was the third one of establishing a department to teach the Chewa AIKS. The findings revealed that this would mean training new teachers and establishing a new structure to run the department. I propose a combination of frameworks one and two. As explained in chapter six, those aspect of the Chewa AIKS that seem to relate closely with a given core subject would be mainstreamed within it while those that seem to be autonomous would better be handled by an independent department of Chewa AIKS. I proposed practical and occupational skills to be handled autonomously. This could pave the way for the same skills to be taught as vocational subjects in post primary education be it formal or non-formal education. From these findings, we may conclude that efforts to integrate the Chewa AIKS with the formal school curriculum will not be an easy one but possible.

Interventions for a sustainable hybridization

The research question in this section was: *What factors can affect the hybridization of the Chewa AIKS and the formal school curriculum?*

The research has identified the need for government to form an indigenous knowledge policy framework that should guide the mainstreaming of the Chewa AIKS. The frame work would also give guidelines on how the Chewa AIKS would be documented, the people with special skills acknowledged and rewarded and the knowledge shared with other institutions. The research has also expressed fears that the economic globalization may privatise the communally owned knowledge and may not benefit the owners of the indigenous knowledge. However, documenting the knowledge and identifying ways of rewarding the custodians of that knowledge and sharing the knowledge with other institutions were still identified as required steps to be taken for a meaningful integration of Chewa AIKS and the formal school curriculum. The findings have identified areas of strengths and weaknesses in all the proposed mechanisms of integrating the Chewa AIKS with the formal school curriculum. This study suggests further research could be needed to establish a

suitable mechanism to be followed. The dilemma revealed by the findings is that both forms of knowledge are said to be rigid systems. They seem to have some prescribed pieces of knowledge they consider to be 'truths.'

Other barriers

The research has revealed that integrating the Chewa AIKS into the formal school curriculum will not mean the end of the challenges facing the implementation of the EFA goals. Little funding to the Ministry of Education and high level of poverty in the country (see Table 1) have been identified as other problems that will act as barriers to the achievement of the EFA goals. The process of integrating the Chewa AIKS into the formal school curriculum and implementing the interventions suggested above require not only the political will but a lot of funding. The poor economic situation in countries such as Zambia, with high child mortality, may make priorities be fighting to keep children alive rather than to keep them in school.

Self- reflection of the research process implications of the results

There are strengths and limitations identified with this study. The limitations seem to be linked to a number of contradictions which the study has identified and which are also presented as areas that may require further research. The use of qualitative methodology and a number of methods used proved to be the main strength of this research. As discussed in chapter five, the nature of the research which was an investigation of whether the Chewa AIKS would enhance the achievement of the Education for All goals was about people's attitudes views, feelings and perceptions over various forms of education. The methodology and methods employed enabled me to have an in-depth exploration of these aspects. The respondents in this research included a cross-section of people with varying backgrounds and experiences. Use of interviews and focus group discussions made it easy to capture various views and opinions of these respondents in their own settings, e.g. chiefs' palaces, under trees, around the fires, offices, on buses in streets and other gatherings.

The other strength was the rare opportunity of interviewing, on the one hand, four Chewa traditional chiefs that included the paramount chief of the Chewa people and their counsellors, and on the other hand, the Director of standards at the Ministry of Education, curricula developers, university lecturers in the School of Education and

some non governmental organisation officers (see Figure 30). Juxtaposing these respondents made this research explore views from both the perceived providers of formal schooling and those perceived to be custodians of the Chewa AIKS to identify areas of common interests and differences. The former are often stereotyped to be against local and indigenous forms of knowledge and the latter as main barriers to formal schooling. The picture that emerged is different from such stereotype views as both value formal school and Chewa AIKS respectively, though with reservations in some cases.

Another strength of this research is that its findings are already benefiting the program of 'localizing the primary school curriculum' currently being piloted in Zambia as discussed in chapter three. A digital video disc (DVD) copy of the 2005 *Kulamba* ceremony of the Chewa people, a product of field work for this research, is already part of resource materials in the Nottingham University library.

The first limitation of this research was that a number of respondents were giving secondary data from what they have heard about Chewa AIKS and not necessarily their experiences hence the prominent use of 'past tense' in some narratives. This raises one key question as to whether conditions which made the Chewa AIKS effective in the past are still intact to manage social changes currently being experienced. This is also one challenge facing IKS observed by Domfeh (2007: on line) that:

In Africa, indigenous principles and values have been significantly altered with the advent of modern state, the production of Western-style education, world religions, increased modernisation of local economies, and the development of modern infrastructural and communication facilities.

However, findings have shown that people still use their own locally generated knowledge to improve their living , showing that despite the social changes brought about by modernity, IKS is still important and like culture, Chewa AIKS is not static but accommodates new forms of knowledge (see chapter four).

Another limitation is that some teachers in the focus group and other respondents were not Chewa by tribe and could have given views about AIKS in general and not necessarily about the Chewa AIKS. However, as discussed in chapter three, AIKS is strikingly similar in many African countries (Odora, 1994). Finally, this research only covered four Chewa chiefs out of forty-one Chewa chiefs in Eastern Zambia.

Claim for originality of this thesis and contribution to new knowledge,

This thesis is a product of my rigorous research for more than five months. The development of the topic stretches beyond the three years of various research activities. It involves my living experiences and contradictions and questions about the school and community culture (see chapter one). The originality of this thesis is that it exposes the marks of my emerging struggles for comprehending the roles of African Indigenous Knowledge Systems (AIKS) and the Chewa AIKS in particular, in developmental issues such as EFA. I am indebted to, among others, Barnhardt Ray, Sillitoe Paul, Serpell Robert and Semali, Ladislaus for their insight knowledge in IKS in general. The theoretical frameworks guiding the research are practical and tested examples which include even those deemed to have failed (see Nyerere's, 1968) Education for Self Reliance (ESR) in chapter two) to show the complexities of integrating two forms of knowledge systems. I feel the conclusions of this research are not imposed on the research but reflect various situations reported by various respondents in the study and supported by literature. This is in line with challenges facing the implementation of the EFA goals.

The research has contributed to the awakening debate on the relevance of IKS to many developmental issues such as EFA. One aspect that has been at the centre of this debate has been the identification of other forms of knowledge that can complement the formal schooling curriculum. This thesis has used frameworks which have highlighted the importance of debate, dialogue, communication and consultations among all stakeholders in the provision of education to all (see chapter three). Some of the information gathered during research is not documented anywhere. The new knowledge includes the revelation that Chewa chiefs' names are titles denoting their roles and responsibilities, the installing of young men and women with secondary school or university qualifications as traditional leaders, the ability by chiefs and their counsellors to form bylaws banning early marriages, use of small boys to herd cattle instead of attending school, initiation ceremonies to be conducted during school holidays to avoid disturbing girls with their school work are all societal transformational changes not documented anywhere. This thesis has given a critical analysis to some of its findings and highlighted some contradictions and contentious issues that may require further research. This research has established that the need to establish education for adaptation (Phelps-Stokes, 1922) has never died neither has

the essence of the 'message' itself changed. What have been changing are terminologies from Education for Adaptation to Education for Self-Reliance (ESR) (Nyerere, 1968), Education for Development (EFD) or Education with Production (Kaunda, 1972). In all these attempts, what has been rejected are the 'messengers' (Colonialists, Nyerere and Kaunda, respectively and not the 'message' (Education for Adaptation). EFA needs education for adaptation. The integration of the Chewa AIKS and the formal school curriculum suggested by this research could be one path to follow.

Recommended areas for further research

As the literature review has shown, the Chewa people have forty-one chiefs in the Eastern Province of Zambia alone and this research covered only four. The first area for further research should be the inclusion of the remaining chiefs in order to generalize the findings. This should be followed by a comparative study of investigating whether the Chewa AIKS in Zambia, Malawi and Mozambique could enhance the achievement of the EFA goals. Such a study should aim at establishing the economic values of the Chewa AIKS to the three countries and how this can 'attracts' parents to send their children to school.

The third area identified for further research is whether *Nyau* "secret schools" could play any significant role in the formal school education. The study should focus on whether it can expand its apprenticeship programs to include pupils in formal schools and possibilities of teaching literacy to the recruits who have lost out on formal school and finally if *Nyau*'s code of conduct could be used to reinforce discipline in formal schools as suggested by some respondents.

The fourth area that require further and urgent research should focus on how the practical skills embedded in the Chewa AIKS could generate meaningful economic benefit to the school, pupils and community and how the low status attached to these skills by the general public be changed

The fifth area recommended for further research should be on the role female chiefs and the queen mother to the paramount chief *Kalonga Gawa Undi* could play in gender education and women development. This study is necessary because lack of role models has been identified by literature as one reason why EFA goals number two and three on girls' education are not achieved.

The sixth area that requires further research should be on possibilities of establishing post primary school programs and trainings in each primary school so that those pupils who do not make it to higher education can do some trainings without necessarily leaving their schools so that the stigma of 'failures' is avoided. The research should focus on how these post primary training skills could be linked to vocational training programs elsewhere. This research should also investigate trainings in the Chewa AIKS that have characteristics of formal and non formal learning e.g. family as the starting point in early childhood education (see Figure 20) so that they are supported by the Ministry of Education. This could further enhance EFA goal number one, three and six.

The seventh area recommended for further research is the identification and compilation of old and new Chewa proverbs and saying of the wise. Focus should be on those proverbs that are gender biased. This study would also be useful for material production for use in the classroom since proverbs are a strong teaching aid in the Chewa AIKS. This research should also investigate whether the structures and some logic of these proverbs have been affected by language development with time and space.

Finally, some aspects identified as dilemmas and contradictions need further research so that the integration of the Chewa AIKS and the formal school curriculum is refined more and more as suggested by Sillitoe *et al.*, (2005) in their model (see Figure 17).

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Appendices

Appendix A: Schedule for Interviews, focus group discussions and observations in Katete and Chipata

Dates	Venue	Sampling Methods	Respondents/ Informants	Type of Interviews
3/11/05	B. A	Opportunist	Mrs Banda	Open-ended
17/11/05	CTTC	Purposeful	CT Phiri	Semi-structured
23/11/05	Katete	Purposeful ((Extreme case)	Paramount chief Undi (university degree in engineering)	Semi-structured
28/11/05	On bus to Lusaka	Opportunist	Major Mbewe	Open-ended
05/12/05	On bus to Lusaka	Opportunist	Mr Tembo (Agric	Open-ended
21/12/05	Katete	Purposeful	Chief banzombe (Semi-structured
25/12/05	Radio Breeze	Purposeful	Banda Daniel	Semi-structured
30/12/05	Katete	Purposeful	Chief Kathumba (with secondary school educ)	Semi-structured
30/12/05	Katete	Purposeful	Headman Azele	Open-ended
31/12/05	Katete	Purposeful	Mai Tivwa	Open-ended
31/01/05	Katete	Purposeful	Community Mentor S. Banda	Semi-structured
31/12/05	Katete	Purposeful	Focus Group	Semi-structured
01/01/06	Katete	Snowball	Herb man (Boniface)	Open-ended
17/01/06	Katete	Snowball	Farmer (Lazalo)	Open-ended
01/02/06	Katete	Expert	Machuani (follow-up)	Semi-structured
01/02/06	Katete	Purposeful	F. G (Teachers)	Semi-structured
02/02/06	Katete	Purposeful	Community school Mentor (Susan)	Semi-structured
03/02/06	Katete	Purposeful	F.G (Kawaza)	Semi-structured
04/02/06	Katete (Kainga)	Purposeful	Mwire (head)	Semi-structured
04/02/06	Katete (Kainga)	Purposeful	PTA chairman/former head	Semi-structured
06/02/06	Chipata	Purposeful	Plan Inter. Chair Mrs Chitamba	Semi-structured
07/02/06	Chipata	Snowball	Mtololo (Businessman)	Semi-structured
08/02/06	Chipata	Purposeful	R Zulu (S E S O)	Semi-structured
08/02/06	Chipata	Opportunist	Sikapizye (crafts work using local seeds)	Open-ended
08/02/06	Chipata	Purposeful	Group Discussion (Lecturers)	Open-ended
10/02/06	Chipata	Purposeful	Mwanza (Educational. Sec. Reformed church)	Semi-structured

Appendix B: Interview schedule for Lusaka

Dates	Venue	Sampling Methods	Respondents/ Informants	Type of interviews
G	r	Purposeful	MOE (Former PS) Dr Kasenda	Semi - structured
29/11/05	MOE Lusaka	Purposeful	Mwatwa (DODE)	Open- ended
30/11/05	CDC Lusaka	Purposeful	Community studies (Nkole)	Semi - structured
30/11/05	CDC Lusaka	Purposeful	Mrs Lungu	Semi - structured
30/11/05	TEVETA Lusaka	Purposeful	Mrs Musanda	Semi - structured
01/12/05	CDC Lusaka	Purposeful	MOE (Former PS)	Semi - structured
01/12/05	MOE Lusaka	Purposeful/Snowball	DODE (Mr Malama)	Semi - structured
05/01/06	MOE Lusaka	Purposeful	Inspector (Nyambezi)	Semi - structured
06/01/06	MOE Lusaka	Purposeful	Director inspectorate	Semi - structured
09/01/06	Open University Lusaka	Snowball	Prof. Mwanza	Semi - structured
11/01/06	University Lusaka	Snowball	Prof. Msalachime	Semi - structured
11/01/06	University Lusaka	Snowball	Prof. Mapapa	Semi - structured
11/01/06	University Lusaka	Snowball	Tambuluzani	Semi - structured
11/01/06	Examination Council	Purposeful	Researcher chilela	Semi - structured
23/02/06		Snowball	Mwenya Musonshi	Open- ended
25/02/06	Researcher on Maths and community Knowledge	Snowball	Dr Kaphesa	Open- ended
03/03/06	Nigeria	Purposeful	Dr Kalawolele	Semi- structured (email)

Appendix: C: Interview questions for paramount chief of the Chewa people

<p>Name: Date & Time: Location of Interview: Gender:</p>

Background Information:

1. Educational Qualifications:
2. Experience as chief:
3. Other relevant Experience:

NO.	TYPE OF QUESTION	QUESTIONS
A.	OBJECTIVE	<p>1. Who are the Chewa people? 2. Where did they come from? 3. How many Chewa chiefs are there and how are they organised functionally? 4. What kind of ceremonies and dances do the Chewa people have and when do they take place? 5. Did the Chewa people support or resist the coming of missionary education. Why was it so?</p>
B.	REFLECTIVE	<p>What set of values and beliefs do the Chewa people feel their community must know, preserve and pass on to the next generation? How do the Chewa people educate their young? What role does each family have in this education How is the Chewa culture preserved and by whom? How important are schools in the Chewa culture? Does the Chewa indigenous knowledge support or hinder the advancement of children in schools? What aspects do either of the two? How do the Chewa people interpret such concepts ‘educating all’, ‘quality’, ‘literacy’, ‘education’</p>
B.	INTERPRETIVE	<p>What aspects of the Chewa African Indigenous Knowledge should be done away with and which ones should be preserved. What aspects of the Chewa African Indigenous Knowledge should be taught in schools? How involved are the traditional rulers in the decision-making process on what is to be taught to your children in schools? Do schools and the community work together? Are chiefs and other local leaders and elders member of the school education boards?</p>
C.	DECISION	<p>What role can you play in forming community committees that can participate in school boards in the District and make them be culturally- responsive school boards. What role can you play as the Chewa paramount chief, in the development of a comprehensive Chewa Tribal educational policy that should address the role of language, culture and community in the education of local youths, and in the implementation of that policy through strong partnership arrangements with the schools? Would you support efforts that aim at making effective use of local expertise, especially Elders as co-teachers when local Chewa cultural knowledge is being addressed in the curriculum? What role can the Chewa royal establishment play in the mainstreaming of AIKS into the school curriculum to enhance the achievement of EFA goals?</p>