

## CHAPTER ONE: INTRODUCTION

The intelligence of an African child has, with the emergence of Western civilization, been measured through Western lenses. This is due to the “historical fact that the seeds of the present were more or less consciously exported to Zambia, as well as to many other parts of the world, by British educators during the first half of the twentieth century” (Serpell, 1993, p.76), whose goals were either to emancipate or oppress, to be humanitarian or exploitative. Most Western colonial administrators and missionaries of that era assumed that if any society wished to benefit from Western technological interventions, they had to import Western institutions and their embedded practices (Serpell, 1993, p.106). Unfortunately, the education package exported by the Western World to the Third world labelled for “enlightenment, liberation and enrichment” (Serpell, 1993, p.106), more often served the opposite, i.e., “...mystification, oppression and impoverishment” (Serpell, 1993, p.106), as civilization was equated to urban life-style; education to schooling; and intelligence to aptitude for school subjects.

The historical process of coming to intelligence and its measure as developed through the Western lens, passed through several stages. These, as outlined by Serpell (1993, pp. 77-78) are as follows:

- a. “Urbanization and craft specialization beginning in the Mesopotamian civilization about 5000 years ago;
- b. The invention of writing and the gradual refinement and standardization of scripts, beginning about 3000 years ago;

- c. The evolution of Western archival scholarship from the first great libraries of Alexandria and Pergamon, through the Byzantine and Islamic libraries and the early Christian monasteries to the establishment of university libraries in medieval Europe and the invention of the printing press;
- d. The transformation of formal educational institutions in Europe from the medieval monasteries through the universities of the Renaissance to the public schools of the eighteenth century;
- e. The development of teaching as a vehicle for religious proselytization, democratization of knowledge and cultural imperialism;
- f. The philosophical articulation of education as a means of enlightenment, closely tied to the emergence of the ideology of Western science in the seventeenth and eighteenth centuries;
- g. The politics of culture contact and social changes in Africa during the nineteenth and twentieth centuries;
- h. The ideology of decolonization and centralized manpower planning for the establishment of autonomous nation-states in the second half of the twentieth century.”(Serpell, 1993, pp. 77-78)

The Western world package of education essentially stood for formal schooling which was expected to happen mostly (if not always), from an institutional formal school set up. This in essence ignores essential and holistic education which is characterized by societal lifestyle and values, the education which takes place prior to formal schooling and in between school periods back at the village.

As the school systems expanded, they established means of selecting some learners for continued and higher education for the few school places, as the number of school places available diminished at more advanced (higher) levels of schooling. The introduction of formal cognitive testing categorized those who passed the particular school tests as having greater scholastic aptitude, often summarized as more intelligent, whereas those who failed to pass the tests, secluded from the rest of the continuing group, were labelled as not intelligent. In this regard, intelligence got to be measured through the progressive school tests on school subjects. On the contrary, research by Irvine, Mpofu, Serpell, and Sternberg suggested that intelligence as conceived among the indigenous communities of sub-Saharan Africa is broader, involves depth and various other dimensions which are generally less related to the activities of schooling (Mpofu, 2002).

### **1.1. Statement of the Problem**

The original concept of education gradually became formalized into school systems for two reasons:

- a. To enable the minds of the Athenian citizens to struggle with something difficult, a theme which still exists in the contemporary prospectus of formal schooling, for schooling is about difficult things (Serpell, 1993, p.82).
- b. To transmit an accumulation of knowledge (Serpell, 1993, p.82).

As the school system developed, so began the need to separate the learners into grades. Grades were for the purpose of separating the students according to their capacities and the difficulty of

the subject-matter they were to be undertaking (Serpell, 1993, p.85). This separation was aided by the examination system. Those who passed the examinations were encouraged and given opportunities to better themselves. In the final analysis, this selection process, which up to date is used by the Zambian government Ministry of Education/Examinations Council of Zambia to select candidates for admission to Grade VIII, becomes alienating. Instead of empowering a community to take charge of its own destiny, to secure greater control over its physical resources, to channel them into a more productive and harmonious way of life, schooling, especially through the examination system, has served to fragment and stratify society into strata of the elite (by Western standards), and to devalue indigenous cultural forms of language, music, socialization processes and even the basic concept of *nzelu*, (which in English roughly corresponds with the domains covered in English by wisdom, cleverness and responsibility) (Serpell, 1993, p.107).As such there is an urgent need “for psychologists in the developing countries to construct tools that will enable them to understand children better in their social context” (Serpell & Haynes, 2004), because the current tools used to measure intelligence ignore a wider range of local concepts of what the school measuring tools claim to measure.

## **1.2. Significance of the Study**

Research on the concept of intelligence is significant first of all because “implicit theories of intelligence drive the way in which people perceive and evaluate their own intelligence and that of others” (Sternberg, 2000). In order to better understand the judgments people make about their own and others’ abilities, it is useful firstly to learn about peoples’ implicit theories of intelligence. Secondly, to understand how implicit theories of intelligence can help to elucidate developmental and cross-cultural differences.

Research on the local concept of intelligence has been conducted by Serpell in Eastern Province of Zambia where he explored the Chewa concept of intelligence. From research on intelligence among the Chewa, Serpell established that the word “intelligence” can be closely associated, (not equivalent to), with the local concept of *Nzelu*, except that *nzelu* appears to have three dimensions, corresponding roughly with the domains covered in English by ‘wisdom’, ‘cleverness’ and ‘responsibility’ (Serpell, 1993, p. 32). Other researchers, (Super & Harkness, 1986; Dasen, 1984; Wober, 1974; Putnam & Kilbride, 1980 and Durojaiye, 1993), have investigated the same topic in West and East Africa.

This research will provide an insight into the concept of intelligence among the Lozi people of Western Zambia. In addition, it will review the appropriateness of Grade Seven selection criteria especially in the use of Special Paper One & Two for selection to Grade Eight which were pretested on a representative sample of pupils in eight out of the nine educational regions before they were adopted for this use (Annual Report, 1973). This research will improve understanding and appreciation of the intelligence of an African child.

### **1.3. General Objective**

The general objective of this research is to explore the Lozi peoples’ concept of intelligence and to discuss whether Special Papers One & Two are an adequate measure of this intelligence.

### **1.4. Specific Objectives**

The specific objectives will be:

- a). To highlight the Lozi concept of intelligence and how it is traditionally measured.

b). To explore, through interviewing of ECZ experts and Grade Seven School Teachers, the validity of Special Papers One&Two tests as a measure of child intelligence.

Through this research, I hope to highlight an aspect of the Zambian concept of intelligence and its rightful measure from an indigenous African perspective.

### **1.5. Research Questions**

The study was driven by one principle research question and three subsidiary questions:

1. What is the Lozi concept of intelligence?
2. What characteristics/aspects of intelligence are assessed by Grade Seven Special Papers One&Two?
3. Are there differences or similarities between the teachers' (expert) idea of intelligence and the Lozi Villagers' (lay) concept of intelligence?

### **1.6. Limitations of the study**

Because the Lozi people are only one of the seven major tribes of Zambia, their concepts of intelligence cannot necessarily claim to be representative of the Zambia national concepts of intelligence of the other six major tribes of Zambia. Furthermore, since I interviewed only a section of Lozi people, this research would not claim that the gathered knowledge is representative of all the Lozi people in Zambia.

## CHAPTER TWO: LITERATURE REVIEW

The question of intelligence and its measure has occupied the minds of psychologists and philosophers from historical times through to the modern time. In the writings of Western theorists, although they are diverse, two recurrent themes are that the trait of intelligence is essentially cognitive and that it enables pragmatic efficiency. Thus intelligence is defined as follows: the ability to meet and adapt to novel situations quickly and effectively; ability to utilize abstract concepts effectively; ability to grasp relationships and to learn quickly (Chaplin, 1985). Piaget (1950) defined intelligence as “a basic life process that helps an organism to adapt to its environment”, or “adaptive thinking or action” (Piaget, 1970). Boring defined intelligence as “what a test of intelligence tests” (Boring, 1923). Intelligence is also defined by others as follows: “The power of good responses from the point of view of truth or facts (Thorndike, 1921); the ability to carry on abstract thinking (Terman, 1916); Sensory capacity, capacity for perceptual recognition, quickness, range or flexibility of association, facility and imagination, span of attention, quickness or alertness in response (Freeman, 1937); ability to learn or having learned to adjust oneself to the environment (Colvin, 1921); the capacity for knowledge and knowledge possessed (Henmon, 1932-1935); biological mechanism by which the effects of a complexity of stimuli are brought together and given a somewhat unified effect in behaviour (Peterson, 1926); the capacity to inhibit an instinctive adjustment, the capacity to redefine the inhibited instinctive adjustment in the light of imaginary experienced trial and error, and the capacity to realize the modified instinctive adjustment in overt behaviour to the advantage of the individual as a social animal (Thurstone, 1938); the capacity to acquire capacity (Woodrow, 1921); the capacity to learn or to profit by experience (Dearborn, 1921); and sensation,

perception, association, memory, imagination, discrimination, judgment, and reasoning” (Haggerty, 1998).

Following the commonality of the themes in the definitions, intelligence can also be understood as “the ability to adapt to the environment and the ability to learn” (Sternberg, 2000, p. 8).

Other theorists such as Psychometric theorists, who are also responsible for developing standardized intelligence tests, define intelligence as an intellectual trait or a set of traits that differ among people and so characterize some people to a greater extent than others (Shaffer & Kipp, 2007). Psychometric theorists then task themselves to identify those traits so that they are measured so that intelligence differences among individuals can be described. But even psychometricians cannot agree on the single structure of intelligence. This indicates that even though it is possible to have universal concepts of intelligence, characteristics of intelligence are consequently influenced by various social, economic and political situations of a given environment.

There are several theories on how to arrive at intelligence. Psychometric theorists of the Multicomponent view hold that intelligence tests should require people to perform a variety of tasks such as defining words or concepts, extracting meaning from written passages and solving mathematical puzzles (Shaffer & Kipp, 2007). Hierarchical models of intelligence view intelligence as consisting of (1) a general ability factor at the top of the hierarchy, which influences one’s performance on many cognitive tests, and (2) a number of specialized ability factors that influence how well one performs in particular intellectual domains (for example, on

tests of arithmetical reasoning or tests of spatial skills). This model implies that each one of us may have particular intellectual strengths or weaknesses depending on the 'second stratum' intellectual abilities we display (Shaffer & Kipp, 2007). This explains why a person can do well solving mathematical problems but struggles with historical problems. So, hierarchical models depict intelligence as both an overarching general mental ability and a number of more specific abilities that each pertain to a particular intellectual domain (Shaffer & Kipp, 2007).

## **2.1. Triarchic theory of intelligence**

Sternberg's Triarchic theory of intelligence holds that there are three aspects or components of intelligence: context, experience and information processing skills.

From the **contextual perspective**, it is understood that intelligence behaviour may vary from one culture or subculture to another, from one historical time to another, and from one period of the life span to another. In upholding this theory, Sternberg believes that we must begin to understand intelligence as adaptive real world behaviour, not as behaviour in taking tests (Sternberg, 1997; 2003).

The **experience component** of intelligence alludes to the fact that people will perform more or less intelligently on a familiar task. If, however, items on an intelligence test are familiar to members of one cultural group but not familiar to another, the second group will perform much worse than the first group, reflecting what Sternberg calls a cultural bias in the testing procedure. Cultural bias is a situation that arises when one cultural or subcultural group is more familiar with test items than another group and, therefore, has unfair advantage over the other culture (Sternberg, 1997; 2003). Sternberg presses on to say that a valid comparison of the intellectual

performances of people from diverse cultural backgrounds requires the test items to be equally familiar (or unfamiliar) to all test takers” (Sternberg, 1997; 2003).

With regards to the **information processing component** of intelligence, Sternberg and other information-processing theorists argue that some people process information faster and more efficiently than other people and that our cognitive tests could be improved considerably by measuring these differences and treating them as important aspects of intelligence (Sternberg, 2003; Tigner& Tigner, 2000).

In short, Sternberg’s triarchic theory suggests that if we want to establish true intelligence of a child, we need to consider the three factors: 1). the context in which they are performing, (that is, the culture and historical period in which they live and their age, 2). their experience with the tasks and whether their behaviour qualifies as responses to novelty or automated processes, and 3). the information processing skills that reflect how each person is approaching these tasks. Unfortunately, as we will see in the exploration of intelligence measuring system of the Grade Seven Special Paper One & Two of the Zambia school curriculum, most widely used intelligence tests are not based on such a broad and sophisticated view of intellectual process.

## **2.2. Gardner’s theory of Multiple Intelligences**

Howard Gardner (1983; 1999) outlines the theory of multiple intelligences, proposing that humans display at least nine kinds of intelligence, each linked to a particular area of the brain and several of which are not measured by IQ tests. These intelligence types follow a developmental course that ends in a corresponding vocational qualification. Table I below shows Gardner’s intelligence types and their ends:

**Table.2.1. Gardner’s Multiple Intelligence**

Type of Intelligence	Intellectual Process	Cerebral System	Vocational end state
Linguistic	Sensitivity to the meaning and sounds of words, to the structure of language, and to the many ways of language can be used.	Left hemisphere, temporal and frontal lobes	Poet, novelists, journalists
Spatial	Ability to perceive visual-spatial relationships accurately, to transform these perceptions, and to re-create aspects of one’s visual experience in the absence of the pertinent stimuli	Right hemisphere, parietal, Posterior, Occipital lobe	Engineer, Sculptor, cartographer
Logical- Mathematical	Ability to operate on and perceive relationships in abstract symbol systems and to think logically and systematically in evaluating one’s ideas.	Left parietal lobes and adjacent temporal and occipital association areas Left hemisphere for verbal naming Right hemisphere for spatial organization Frontal system for planning and goal setting	Mathematician , Scientist
Musical	Sensitivity to pitch, melody; ability to combine tones and musical phrases into larger rhythms; understanding of the emotional aspect of music	Right anterior temporal Frontal lobes	Musician, composer
Body-kinesthetic	Ability to use the body skillfully to express oneself or achieve goals; ability to handle objects carefully	Cerebral motor strip Thalamus Basal ganglia Cerebellum	Dancer, athlete
Interpersonal	Ability to detect and respond appropriately to the mood, temperaments, motives, and intentions of others	Frontal lobes as integrating station between internal and external states\people	Therapist, public relations specialist, salesperson
Intrapersonal	Sensitivity to one’s own inner states; recognition of personal strengths and weaknesses and ability to use information about the self to behave adaptively	Frontal lobes as integrating station between internal and external states\people	Contribute to success in almost any walks of life
Naturalist	Sensitivity to the factors influencing, and influenced by, organisms (fauna and flora) in the natural environment	Left parietal lobe (discriminating living from nonliving things)	Biologist, naturalist
Spiritual/existential (speculative at this point)	Sensitivity to issues related to the meaning of life, death, and other aspects of the human condition	Hypothesized as specific regions in the right temporal lobe	Philosopher, theologian

Table.2.1.

[Source: Adapted from *Frames of Mind: The Theory of Multiple Intelligence*, by Howard Gardner, Perseus Books Group, 1983; and Branton Shearer, “Multiple Intelligence Theory after 20 Years,” *Teachers College Record*, 106, 2-16, 2004.]

While Gardner outlines these nine kinds of intelligence, he does not claim that these nine represent the universe of intelligence as he makes the case that each ability is distinct, each ability is linked to a specific area of the brain and follows a different developmental course (Shearer, 2004). In this regard, therefore, injury to a particular area of the brain usually influences only one intelligence ability, leaving others unaffected. Henceforth, as Shearer observed, oftentimes we misrepresent and underestimate the talents of many individuals by trying to characterize their 'intelligence' with a single test score (Shearer, 2004).

In USA, three experiments investigating experts' and lay persons' conceptions of intelligence were conducted by Sternberg et al., (1981) in Mainland USA. The first study, upon which, in many ways I will build my research, involved asking randomly selected people, questions on intelligence. Persons studying in a college library, entering a supermarket, and waiting for trains in a railroad station were asked to list behaviours characteristic of either 'intelligence', 'academic intelligence', 'everyday intelligence', or unintelligence and ...to rate themselves on each of the three kinds of intelligence (Sternberg et al., 1981). From this research, three factors of an ideally intelligent person emerged:

The first factor included behaviours such as reasoning logically and well, identifying connections among ideas and seeing all aspects of a problem (Sternberg, 2000). The second factor included behaviours such as speaking clearly and articulately, having verbal fluency and conversing well (Sternberg, 2000). The third factor included behaviours such as accepting others for what they are, admitting mistakes and displaying interest in the world at large (Sternberg, 2000). This factor, however, as Serpell noted in his article, 'Intelligence and Culture', has been objected to

by several researchers who claim that to include social and emotional attributes of intelligence under the heading of intelligence would obscure important technical distinctions between cognition and motivation, ability and disposition and between general competence and special talents (Serpell, 2000).

Contrary to the “expert” concept of intelligence, research in Africa on concepts of intelligence emphasizes the social dimension of intelligence which comprises depth and breadth of cognitive processes which oppose speed of cognitive processes. But historical influence of the Western world on the Third world regarding the concept of intelligence and its measure continues to influence our school systems in Zambia in the measure of the intelligence of a child. In the use of psychometric measures of intelligence, the current school system neglects broader concepts of intelligence, such as highlighted by other researchers in Africa.

### **2.3. Social Dimension of Intelligence**

From studies in Africa, Ruzgis and Grigorenko (1994) have argued that, in Africa, concepts of intelligence evolve largely around skills that help to facilitate and maintain harmonious and stable intergroup relations. Intragroup relations are probably equally important and at times more important. Serpell (1974, 1977 and 1982) found that Chewa adults in Zambia emphasize social responsibilities, cooperativeness, and obedience as important to intelligence. Intelligent children are also expected to be respectful towards adults (Serpell, 2000). In one Kenyan community, for example, parents emphasize reasonable participation in family and social life as important aspects of intelligence (Super & Harkness, 1986). Furthermore, among the *Kokwet* of western Kenya, the word *ngom* was applied to child intelligence and seems to denote responsibility,

highly verbal cognitive quickness, the ability to comprehend complex matters quickly, and good management of interpersonal relations. The word *utat* was applied to adults and suggests inventiveness, cleverness, and sometimes wisdom and unselfishness. A separate word, *keelat*, was used to signify smartness or sharpness (Sternberg, 2000). In Uganda, there are various notions of intelligence emphasized by different tribes. The Baganda associate intelligence with mental order, whereas the Batoro tribes were inclined to associate it with some degree of mental turmoil (Wober, 1974). In South Africa, the Venda use two words for intelligence: *Maano* and *Vhutali*. *Maano* refers to situational intelligence, and especially to the ability to discriminate between actions that are or are not culturally appropriate. *Vhutali* is used only in a complimentary way to refer to a person's socially productive intelligence, insight into understanding more than sheer cleverness (Blacking, 1982).

Generally, most research findings on African concepts of intelligence tend to acknowledge the aspect of the social dimension of intelligence. Since communal living and sharing is cardinal to an African way of life, social responsibility or *ku tumikira* (in Chewa), which is subdivided into “*mva/-mvela* (attentiveness, obedience) and *khulupilika/-mvana* (trustworthiness, cooperativeness), is an equally significant dimension of the concept of intelligence (Serpell, 1993).

As Sternberg and Grigorenko observed that while these highlighted concepts of intelligence emphasize social skills more than do conventional Western conceptions, they simultaneously recognize the importance of cognitive aspects of intelligence (Sternberg & Grigorenko, 1997).

#### **2.4. Depth and Breadth vs Speed of Cognitive processing**

In a research by Durojaiye among the tribes of Nigeria, his findings revealed that the Yoruba tribe emphasizes the importance of depth of listening and of being able to see all aspects of an issue in its proper overall context rather than just referring to intelligence (Durojaiye, 1993). Although Western theories of intelligence emphasize speed of mental processing, this emphasis is not shared by many cultures (Sternberg et al., 1981). On the contrary, some Western theorists have pointed out the importance of depth of processing for full learning and understanding of what one learns ( Craik & Lockhart, 1972). According to this view, speed is generally seen to undermine the quality of work because less time is given to fully grasp what one wishes to achieve or learn.

My research is similar to that of Serpell's research among the Chewa people of Eastern Province of Zambia, in his effort to evoke the principle characteristics of the indigenous Chewa peoples' point of view for conceptualizing children's intellectual development (Serpell, 1993). It will involve a journey into the local (Lozi) notions and concepts of intelligence, especially among children.

The findings of the local concept on intelligence will be related to what is measured by Grade VII Special Paper One & Two examination, which is "one of the two reasoning papers used in the Form I selection" (Psychological Service, Annual Report, p.6. 1973) and seemsto be the standard measure of intelligence.This research has added new knowledge and understanding of the local people (Lozi)'s concept of intelligence. Hence, correct school measures of intelligence should be investigated in order that school examinations measure the correct concepts of intelligence in order not to divide local communities and societies into: those who have Western

education (intelligent) on one hand and those with village education (unintelligent) on the other hand.

### CHAPTER THREE: METHODOLOGY

In order to realize the objectives of my research, a hermeneutical phenomenology type of qualitative research method was used.

The hermeneutic component of phenomenology is the art of interpreting the phenomenon. A researcher using the phenomenological method seeks to describe the meaning that several individuals give of their lived experiences of a concept or a phenomenon. It describes what all participants have in common as they experience a phenomenon (Creswell, 2007). To enter into the lived experiences of the participants, the researcher must set aside his/her own lived experiences in order to experience a new reality entirely based on the lived experiences of the local people. Thereafter, the researcher interprets the various expressed meanings that arise from participants' lived experiences (Creswell, 2007).

According to Creswell, the types of problems suited for this type of research are those in which it is important to understand several individuals' common or shared experiences of a phenomenon in order to develop practices or policies about the features of the phenomenon (Creswell, 2007). In a phenomenological study, data is collected by interviewing a group range of between 5 to 25 individuals who have experienced the phenomenon or concept. Consequently, in pursuing a hermeneutic phenomenological approach, I resolved to stay with the Lozi people for a period of one month to understand and later interpret their concepts of intelligence. I sought to relate my field research findings to my findings on characteristics of intelligence measured by Grade Seven Composite Examination administered by Examinations Council of Zambia (ECZ).

While phenomenology asks participants only a few (one or two) broad questions, I formulated subsidiary questions that would help me filter out responses that would be influenced by gender, relationships between participants and the person they would be describing, as well as how they would tend to relate to me since I was not only visiting them as a researcher but as a Catholic priest as well.

### **3.1. Data Collection and Analysis:**

#### **3.1.1. Data Collection**

In this research, the researcher collected data from three sources: the local (Lozi) villagers from the villages of: Nandopu, Nakasheke, Liyoyelo, Lealui, and Naloko in Mongu area (refer to figure 3.1.), selected Grade Seven School Teachers of Mongu Basic School and Limulunga Basic school in Mongu (Mrs. Melody Kasoma Kabwebwe; Mrs. Rebecca Chipango Kapalu; Mrs. Kabubi and Mrs. Kalimukwa); and some staff at the Examination Council of Zambia. With the help of a research assistant, the researcher gained access through to the villages and to the royal establishment to interview: three *Indunas* (Induna Tungulu, Induna Lingomba and Induna Ngenda), who are traditional leaders from the Barotse royal establishment, seventeen adult male, twenty six adult female and nine youth (5 boys and 4 girls). This provided for a purposive sample size of fifty five informants.

#### **Data collection procedure**

Before going out into the field, the researcher composed a checklist of questions for topics to cover. However, due to the nature of this research, the researcher did not strictly follow the outlined questioned. Interviews were unstructured and followed the natural flow of

conversations, depending on the informants' responses. To aid in data collection, the researcher used an electronic recorder as well as a note book. Information was recorded using both the electronic recorder and a notebook.

The data collected from the informants was analysed and synthesized into common concepts resulting from the frequency of occurrence of particular characteristics of intelligence. Thus, even though fifty five informants were interviewed, characteristics of intelligence do not match that number.

### **1. From Selected Local Villagers/Lay People**

In order to explore the local (Lozi) concept and criteria of intelligence, the researcher used the research method employed by Sternberg et al., 1981, in their research on intelligence in USA, i.e., that of interviewing the people in the context of their everyday life. The villages were selected in Mongu because of the uniqueness each one of them possessed. While the village of Limulunga claims to be an authoritative representation of the Lozi traditions in the Mongu area, the village of Lealui, known as the village where the Lozi culture and tradition is born and taught, is the place of the Royal Traditional Lozi Court which is administered by the *Indunas*<sup>1</sup> who form the Leadership team of the Barotse Royal Establishment. Similarly, Nandopu, Nakasheke and Liyoyelo are villages in the flood plains of Mongu where livelihood is typically influenced and characterized by rice growing and fishing (refer to figure 3.2. & figure 3.3.). Naloko is a village on the banks of the Zambezi River. Most of the members of Naloko village are fishermen and women. In each one of these villages, both men and women were interviewed. The total number of interviewees in each village varied according to availability. However, as records will show,

---

<sup>1</sup> Members of the Barotse Royal Court.

the researcher succeeded in interviewing an even greater number of people than initially planned. While elders, who are the source of wisdom and holders of traditional cultural perspectives in the villages, were to be interviewed, the researcher also interviewed at least nine youth, some of whom had been through formal schooling.

All these villages are in the Mongu area of Western Province of Zambia. Mongu in particular holds itself as the summit of the Lozi tradition and, these villages are considered authentic representatives of the local tradition.

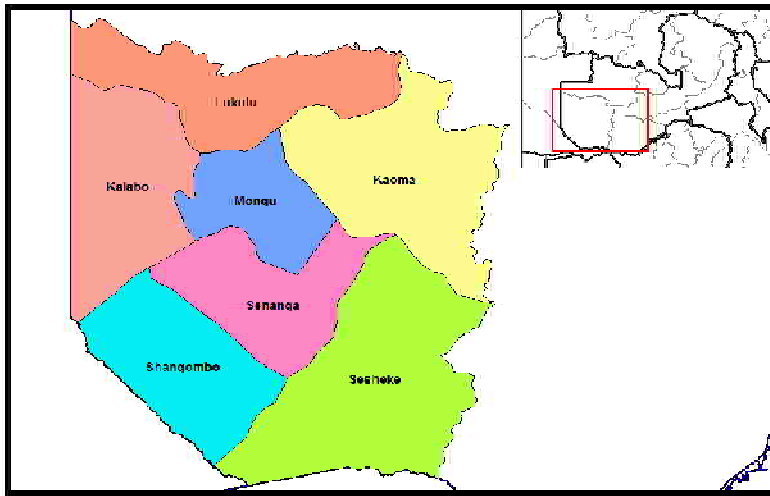


Figure.3.1. Map of Western Province of Zambia.  
[Source: <http://images.google.com/imgres?imgurl=http://upload.wikimedia.org>: Accessed on June 10<sup>th</sup>, 2013].



Figure3.2.The Barotse flood plains . [Source: <http://images.google.com/imgres?imgurl=http://mw2.google.com/mw-panoramio/photos/medium/49626257>: Accessed on June 10<sup>th</sup>, 2013].



Figure 3.3. The Barotse Flood Plains.[Source: Picture by Barnabas Simatende- March 2013]

While most of the elders interviewed had no formal education, for the purpose of my research, some of the elders who were interviewed had been through some formal education and still gave me traditional Lozi concepts of intelligence.

The researcher was introduced to the research community by an English and Lozi Language teacher, (Mrs. Beatrice Simate), who has taught, lived and known the area. She is a personal acquaintance whose guidance led me to collect such a credible data bank of knowledge, necessary for me to achieve my research objectives.

While the researcher was going to rely on the research assistant, Mrs. Simate, for guidance and to help open up doors and initiate conversations, my familiarity with the Lozi language helped my informants to express themselves more fully in providing me with necessary data as they spoke to me in their native language which I equally understand. The fact that the researcher spoke with them using their language, helped them to be more open and to trust and express themselves with much ease. As one of them, Mr. Mubiana of Nakasheke, village noted, "*Na nütumela ku mina kakuto bulela ni luna mwa Silozi isini Sikuwa kuli luto utwana handende. Ha mu sika eza inge babamu babato lu bulelisa mwa Sikuwa. Mwa hae mo babanwi ha ba zibi Sikuwa.*" (I am just thankful that you came and spoke to us in Lozi not in English so that we hear and understand one another well. You did not do as others do; those who will come and speak to us in English. Here in the village, others do not know English). In addition, I was equally able to explain my questions with clarity whenever it was necessary, resulting in much fruitful conversations with them.

Besides being a research student from the University of Zambia, my other entry point was as a Catholic priest, which is what I am by profession. My research assistant made known to my informants that while I went to them as a field researcher, I am also a Catholic priest who was conducting research on the indigenous concept of intelligence. Identifying myself as such helped to elicit sincere responses to my research questions. Without taking this for granted, the researcher paid particular attention and screened out responses that were characterized by my informants' formal relationship with a priest. The moment the researcher sensed responses that were characterized by this relationship, the researcher quickly changed the questions to ones which would refocus them on my research topic. Another way of screening responses from being coloured by the informants' way of being, talking and relating to a priest, the researcher had intended to use some subsidiary questions to my principal research question. However, conversations were steered back to our focus by eliminating elements that would begin to border on faith engagement.

As the knowledge of me being a priest provoked mixed expectations regarding the reasons a priest would be conducting a research, with the help of my research assistant, the researcher shared with them the motivation for conducting this particular research. i.e., to explore the local concept of intelligence and the relevance and/or validity of the current intelligence measuring tool (Special Papers One & Two).

Using the method used by Sternberg et al., (1981), in their research on intelligence in USA, I orally interviewed the informants (rural men and women) with two principle questions.

Whenever the need arose, I used any one of the four subsidiary questions, all of which are translated in Lozi and are as follows:

#### *PRINCIPAL QUESTIONS*

1. From your life and interaction with people of your village, what kind of a person is an ideally intelligent person to you?*(Kakuya kamo muzibela ni ku pilela mwa hae mo, mwanana ya nani ngana ki mwanana ya cwani?)*
2. According to the Lozi culture and tradition, what is intelligence or an intelligent child?*(Ka kuya ka sizo sa Silozi, ngana ki nto mani kappa mwanana ya nani ngana ki mwanana ya cwani?)*

#### *SUBSIDIARY QUESTIONS*

1. Without mentioning their names, think of 3 (three) other people who would fall under the same category of intelligence you have just described.*(Ku sina ku ba punda mabizo nahana batu babalalu baba wela mwa sikwata se sa bangana).*
2. What is their gender?*(Ki bana kappa ki basali?)*
3. What is their education background?*(Neba keni sikolo nji?)*
4. Do they go to Church?*(Ba kena keleke?)*

Whenever these subsidiary questions had to be used they helped screen out possible responses that would be influenced by gender and biases of education background, as well as those influenced by the informants' notions or ways of relating to a Catholic priest. For example, the question on gender helped me find out whether the responses received were gender influenced.

The question on if they go to Church, helped screen out the possibility of feeding me information which the responded felt the researcher needed to hear because of my nature as a priest.

## **Documentation**

While in the field, data from informants was documented using a recorder as well as using a note book. Later when the researcher briefly returned to his base in Mongu, the researcher I further documented all data on the computer and saved it electronically. Therefore, these records served as the raw data of the research project.

### **2. From Selected Grade Seven School Teachers**

From two randomly selected primary schools in Mongu area, I interviewed four Grade Seven School teachers to explore their understanding of the characteristics/qualities of intelligence that is assessed by Special Paper Two examination. This I did from the background understanding that Special Paper Two is used in Grade Seven exams as a measure of intelligence for those seeking entry into Grade Eight. I carefully documented the teachers' responses.

### **3. From Examination Council of Zambia (ECZ)**

I interviewed purposefully selected staff members at Examination Council of Zambia,(ECZ), who deal with setting Special Paper Two in order to explore the characteristics of intelligence they assess through Special Paper Two.

### **3.1.2. Data Analysis**

The data which I collected and documented from my interviews with the local villagers (lay people), will inform my principal objective of exploring the local (Lozi) concept of intelligence.

Secondly, in this paper, I will relate the data collected from my interview of some selected Grade VII School Teachers of Mongu and selected staff at Examination Council of Zambia (ECZ), to the Traditional Lozi concept and measure of child intelligence, which I gathered from my interview of the villagers. Through this I will explore and show the reliability of the two forms of assessment of intelligence (Village and Primary School measure).

### **3.1.3. Pilot Study**

The researcher arrived in Mongu on the evening of Tuesday August 28<sup>th</sup>, 2012 for the Pilot study of the research on the Lozi peoples' concept of Intelligence. As the intended research assistant Bo Mary Nasilele was no longer available for research work with with the researcher due to other engagements that emerged, the researcher requested the expertise of another retired Primary School teacher, another acquaintance of mine, Bo Beatrice Simate, to accompany me on my research journey among the Lozi of Western Province. Beatrice has equally lived in and hails from the villages in the plains of Limulunga itself. In this regard, therefore, she is conversant with the local reality of the people we were to be visiting. Given that the principal researcher was male, it was wise that the research team be gender balanced for ease of interaction with both sexes.

The researcher chose to conduct the pilot study in Mongu area but in villages different from those of the actual study. Since the research focuses on the Lozi people of Western Province, the

pilot study was therefore, conducted within the perimeters of the same people of the same culture who would also be interviewing in the actual study. In this regard, Bo<sup>2</sup> Beatrice and I planned and launched out to visit the three villages Nandopu, Nakasheke and Liyoyelo near Limulunga in Mongu.

The total number of the people interviewed during the Pilot Study was eight. These are: Bo Mukebu Lindunda, Mataa, Denis, Bo Lubasi, Bo Mubiana, Akayombokwa, Namataa and Namwaka. Of these, four were men (*Mataa, Denis, Bo Lubasi and Bo Mubiana*) and the other four were women (*Bo Mukebu Lindunda, Akayombokwa, Namataa and Namwaka*). Of these, four were elderly (*Bo Mukebu Lindunda, Mataa, Bo Lubasi and Bo Mubiana*) whereas the other four (*Denis, Akayombokwa, Namataa and Namwaka*), were youth.

Our first visit was at Nandopu Village. We had an easy entry into the village since Bo Beatrice was known at the village as Bo Ma Simate (The Mother of Simate) which is an address to wives. Instead of being addressed as Mrs., wives are addressed as “Mothers” of their husbands.

Through their reception, it was evident that the people were going to be open to us since due to the company of someone familiar to them. They offered us seats. They gave me a type of chair, *the lazy man's chair*, which Bo Beatrice later explained to me that it was the type of chair traditionally assigned to men. The researcher was also first to be seated, a sign of either more respect given to men than to women and/or because we were being seated by a woman who in this case opted to serve a man first. As well it was because the researcher was the stranger on that visit and it is significant for the local people to treat visitors well. Only secondly was a small stool given to Bo Ma Simate to sit. While Bo Beatrice would have preferred that we interview the

---

<sup>2</sup> “Bo” is a Lozi prefix for respect to an elderly person.

village headman, unfortunately, he was not at the village that day. Instead, we interviewed his wife Bo Mukebu Lindunda and her elderly son, Mataa Lubasi.

From pilot study, the researcher learned that the research questions were on target for exploring the Lozi concept of intelligence and its measure. Secondly, my fluency in Lozi language gave me an advantage as the informants could easily understand me without seeking any form of interpretation. Thirdly, although my professional qualification as a Catholic priest would obscure the authenticity of the feedback, the researcher deliberately kept this under check by using subsidiary questions. In this regard therefore, the researcher was motivated to journey on into field research without much change to the original plan.

#### **3.1.4. The Field Research- Lealui, Mongu**

As research on the Lozi concept of intelligence continued, the researcher particularly chose to visit the site that would be more authentic of traditional outlook on life according to the Lozi people. So the researcher visited Lealui, the very heart and traditional focal point of the Barotse Royal Establishment. Lealui is an Island residence of the Lozi King. The researcher learned from the history of the Lozi people during the visit with them at Lealui that as they migrated into Barotseland, they came to establish their Kingdom at Lealui, a flood Island. During the floods, they migrate to the Highlands of Limulunga through the traditional ceremony known as Kuomboka (Coming out of the water). Being the traditional headquarters of the Lozi people, it commands authenticity of the Lozi tradition. It is the place of Royal Lozi leadership where one has an opportunity to interact with some members of the Royal Establishment, the Indunas, who form the council of elders and who also form the judiciary of the traditional local court. The

Indunas instruct and uphold the Lozi tradition and traditional ethics among their people and any visitor to the region. My research with and through this royal village ensured that I would collect concepts of intelligence which would be more authentically Lozi.



Figure 3.4. The researcher: Barnabas Simatende; assistant Researcher: Beatrice Simate and paddler, enroute to Lealui on the flood plains. *[Source: Picture by Barnabas Simatende- March 2013]*



Figure 3.5. Main entrance to the palace of the Litunga- the Lozi traditional chief in Lealui.  
[Source: Picture by Barnabas Simatende- September, 2012]

The total number of informants in the field at Lealui was 55:- 3 Indunas- (*Induna Tungulu*; *Induna Lingomba* and *Induna Ngenda*); 17 males; 26 female and 9 youth (5 boys and 4 girls).

## CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS

Here in this chapter, the researcher presents research findings.

### 4.1. Concepts of intelligence collected from Pilot Study

Based on research, the Lozi people categorize their concepts of intelligence into two. These are Ngana tanu and Ngana takuwanina. The table below illustrates this conceptual framework.

Ngana tanu (Natural/Innate intelligence)		
Ngana takuwanina (Acquired intelligence)		
<i>(Influenced by: heredity, environment and social-class and ethnic differences in IQ)</i>		
<p>Economic independence</p> <ul style="list-style-type: none"> <li>• Ability to survive on one's own.</li> </ul>	<p>Social family responsibility</p> <ul style="list-style-type: none"> <li>• Intelligence as intellectual curiosity expressed through questions about origins of family.</li> <li>• Way of being with others as characteristic of intelligence.</li> <li>• Social responsibility as characteristic of intelligence.</li> <li>• Responsiveness/reliability as intelligence.</li> <li>• Respectfulness (Likute/Maoyo).</li> <li>• Kindness as intelligence.</li> <li>• Understanding (<i>Kutwisiso</i>)/Self-respect (<i>Kuikuteka</i>)/Listening (<i>Teeleza</i>) and following the tradition of the parents.</li> </ul>	<p>Academic cognitive power</p> <ul style="list-style-type: none"> <li>• Desire to learn what is intelligible.</li> <li>• "<i>Bunangu</i>"- ability to grasp things swiftly.</li> <li>• Ability to master what has been taught.</li> <li>• Intelligence is ability to replicate what is perceived.</li> <li>• Intelligence as having an Idea.</li> <li>• Initiative as intelligence.</li> <li>• Cleverness (<i>Butali</i><sup>3</sup>) and Knowledge (<i>Zibo</i><sup>4</sup>) as intelligence</li> </ul>

Table. 4.1.

<sup>3</sup> Lozi word for cleverness

<sup>4</sup> Lozi word for knowledge

#### 4.1.1. Ngana tanu and Ngana takuwanina

Bo Lubasiof Nakasheke village introduced two distinctive concepts of intelligence: “*Ngana tanu ki ngana yaku pepwa ni yona. Ki ngana ya lu file mulimu*” (This is the intelligence a child is born with. It is the intelligence God gives us and we are born with it). According to this concept, *Ngana tanu* is distributed differently. There are children who are born with plenty of it. Others are born with less of it. Those with more *Ngana tanu* are called talented. They are listened to, respected and entrusted with leadership roles. Those with less *Ngana tanu* are looked down upon when interacting with others. When they go playing, one with less *Ngana tanu* is assigned lower grade roles while the one with more *Ngana tanu* is given higher roles. “*Habeza kwa mandwani, yani ya nani ngana tanu yeinyani ye nabamu biza Luwawa. Kono yani ya nani ngana tanu ye ng’ata, yena bamu biza kuli kiyena muna munzi. Ki yena ya ka zamaisa munzi kaufela*”. (When they are at play, the child with less *Ngana tanu* will be assigned as foxes in the village. But the one with more *Ngana tanu* will be assigned as the village headman who will preside over the whole village). I further inquired into the characteristics that determine the various roles the children are assigned at play.

“*Ye bafa kuli a be mung’a amunzi ki mwanana ye baboni babanwi kuli unani zibo mwa lika. Nimwa bulelela cwalo keke ba bona kuli yo ki yena mun’ga munzi. Yaani Sitongwani ki mutu ya swana inge lisholi. Fo kunwi u apilikeza banana kuli amulwane. Ki Sitongwani mutu ya cwalo. Kakuli za eza liisa kwa likolofalo.*” (The one who is assigned as the village headman is a child whom others have seen to have knowledge in things. Even the manner of speaking indicates to others that this one is the village headman. The one who is assigned as a fox is a child who is like

a thief. At times such a child will force other children to fight. Such a child is a fox because what he/she does leads to harm).<sup>5</sup>

It is evident in these responses that the character that is manifested through acts is also another attribute that provides insight into the natural intelligence nature of a child. By the way a child speaks, interacts with others, it is indicative of the degree of the natural intelligence (*ngana tanu*) which a child is born with.

On the other hand, “*Ngana takuwanina ki ngana ye lu fumana mwa libuka ni ka ku pila ni batu*”, (The second form of intelligence, is the kind that we find from formal schooling using books and by living with others). This is the intelligence a person acquires by applying himself/herself.

#### **4.1.1.2. Ability to survive on one’s own**

According to the Lozi people, an intelligent person is one who can survive on his/her own. In this respect, one characteristic of intelligence is the ability to survive. This means having knowledge of things that are necessary in order to survive and having an aptitude to engage them for survival. I asked Bo Mukebu Lindunda this question in Lozi, her local language:

*Haluka inga mwanana kapa mutu feela, kwa neku la ngana, luka bulela kuli mwanana kapa mutu ya nani ngana ka mo luzibela mo luinezi mwa hae mo, ki mutu ya cwani?* (If we take for instance a child or any other person and look at them from the point of view of intelligence, as we traditionally know, what kind of a person is an intelligent person?)

---

<sup>5</sup> Bo Lubasi’s hierarchical distinctions of Natural Intelligence, Ngana Tanu.

She answered: *Mutu ya nani ngana ki mutu ya kona kuipilisa*<sup>6</sup> (An Intelligent person is a person who can survive on his/her own).

Similarly, Namataa agrees when she said, “*Mutu ya nani ngana ki mutu ya kona kuipilisa mwa bupilo bwa hae. Haiba hakeni sikolo waitimela ku li a fumane fa ku pilela*” (An Intelligent person is a person who can survive on his/her own in life. If he does not go to school, he grows food to find something to survive by).

Intelligence is then ability to survive on your own. This cultural notion of surviving does not have connotations of stealing or getting things from others in order to survive. But it is understood in the sense of utilizing the naturally available means to grow crops or to engage in local fishing activities.

Extending this concept, Bo Mukebu Lindunda further added that a person does not need to have been to school to possess this intelligence. *Ka ngana ya hae, mutu wa fumana zatokwa kaufela, neba hasika kena sikolo* (By his/her intelligence, a person fends for himself/herself and survives even without having gone to school). According to Bo Mukebu, ability to survive is to do things that will make one stay alive:

*Neba cwalo wa lima tu Rice...wa fumana neba five bags...masaka a five a, wa ina fafasi wa nahana kuli cwale masaka a five a, nikona ku aeza cwani...wa lekisa kwateni amamu kuli uleke kwateni ka tenge, uleke kwateni ka t-shirt. Kakamu ka wacha- kakusasana wa*

---

<sup>6</sup> Bo ma Mukebu Lindunda

*cha, manzibwana wacha. Kakamu ka wabulukela peu ya silimo sesi tatami*<sup>7</sup> (One can survive for example by growing rice. You harvest maybe five bags. Of the five bags, you sit down and think what to do with the five bags. You sell some so that you can buy a chitenge (wrapping material, especially for women) or a T-shirt. Then you leave some for food. You eat in the morning and in the afternoon. You also leave one bag as seeds for the next farming season).

Seen in this light, Bo Lindunda argued that school is not the principle measure of intelligence:

*Ya keni sikolo wa kona ku pasa hande-nde Grade Twelve ya hae, ma setifiketi a zamaile handendende...kono lwa ba bona, bapila mwa ma club ama cwala...yaale yaeza kuli yena uzwezi mwa Grade Five kapa Grade Six cwalo...haswala muhuma wa hae, ki yena ndatahe ki yena mahe wa kwa pata.* (The one who goes to school can pass very well his/her Grade Twelve with good certificates. But we see them, they live in night clubs. But the person who drops out of school either in Grade Five or Grade Six, when he/she holds a hoe, s/he becomes the father or a mother of the future).

Clearly this challenges the association of intelligence with formal schooling. According to this concept, to be schooled is not to be intelligent. One can get the highest form of education but still not be a dependable figure in society as representative of becoming the father or the mother of the future in Bo Lindunda's postulation.

---

<sup>7</sup> Bo ma Mukebu Lindunda

#### 4.1.1.3. Respect and obedience to elders and to obey rules

In Lozi culture respect and obedience to elders are significantly valued attributes and are as such notable characteristics of intelligence.

The researcher asked MataaLubasi the principle research question, “*Mutukapa mwanana ya nani ngana ki mwanana ya cwani?*” (A person or a child who is intelligent, what kind of a person is it?)

He answered, “*Mwanana ya nani ngana, ki mwanana ya hula anani likute, ya eza misebezi kaufela ya bulelelwa ki bashemi ba hae, ya latelela milao ya bashemi*” (An intelligent child is a child who grows up with respect, a child who carries out everything he/she is told by the parents, a child who follows all the rules of his/her parents). Denis, a graduate of Limulunga Basic School shared this same notion or characteristic or quality of intelligence: “*Mwanana ya nani ngana kiya nani likute kwa bashemi ba hae ni kwa batu kaufela* (An intelligent child is one who has respect for his parents and other people). According to the Lozi culture, respect to parents extends to respecting all elders as well since elderly persons are representative of parenthood.

According to Bo Lubasi, intelligence begins from home. It persists through formal schooling. *Haiba kuli mwanana wa kuteka batu ni ku latelela milao uka ba wa ngana ni kwa sikolo kaufela* (If a child respects people and obeys rules, such a child will be intelligent even in formal schooling).

Bo Lubasi blamed failure in formal school to inattentiveness influenced by bad company of the friends a child surrounds himself/herself with. He noted that children come from different homes with different influences. Interaction with children who are from challenged upbringing corrupts an “intelligent” child:

*Tuto mutu uya kwa kuituta. Hasa isi kwateni ngana, hana kuyo fumana kuli tuto ibunolo.*

*Kono haisa kwateni ngana, uka fumana kuli tuto ibunolo* (A person goes to learn. If a person does not pay attention, a person will not find schooling easy. But if a person pays attention, he/she will find schooling to be easy).

#### **4.1.1.4. Social responsibility as characteristic of intelligence**

Life in the Lozi traditional set up encourages and promotes social responsibility. This acknowledges that human beings are social in nature. To be socially responsible, therefore, is called for as characteristic of intelligence.

Bo Mukebi Lindunda noted love, concern for others and desire to learn from others as some qualities or characteristics of an intelligent child:

*Question: Ki likamani ze lu bonisa kuli mwanana yaani uka ba wa ngana?* (What are some indicators of intelligence in a child?) Bo Lindunda observed that an intelligent girl-child, for instance, is one who has concern for others. She used the example of her granddaughter:

*Kakuli lusa lobezi, uka utwa ka lu bala, “Kuku mu zuhile cwani? Kuku ba basali, kuku ba bana.” Peto kikale uziba feeela kuli katu kaa ka hula ni ngana. Ha ka koni ku zuha feeela*

*ku yo bapala*<sup>8</sup> (While we would still be asleep, she greets us “Grandmother and grandfather how are you? She greets each one of us individually, “Grandmother, grandmother”. Then you already know that this child is growing up with intelligence).

In the same vein a boy child is known to grow up with intelligence if he manifests willingness and desire to learn from the elders.

*Kwa bashimani, uka bona kuli ka kakaba ni ngana kakalatelela ze baeza bo kukuakona. Bokuku atona baye mwa mushitu, nitona twalatelela; bo kuku atona baye kwa masimu, nitona twa latelela*<sup>9</sup> (Among the boys you will realize which child will grow up intelligently by their desire to emulate the elders. When the grandfather goes hunting in the forest, they also follow; when the grandfather goes to the fields, they also follow).

The desire to learn through active participation and the realization of the need to learn so that knowledge can be passed onto them is characteristic of an intelligent child.

*Fo kunwi lwa tufanga mimbeta ya mikomena ya miloho. Haukayo zuha, uka to fumana kuli kona ki kale ka selaela kale* (Sometimes we give them vegetable beds for them to take care of. By the time you wake up, you find that she/he has already watered his/her vegetable bed).

Intelligence in this sense is similar to Vygotsky’s concept of Participatory Appropriation. Ability to appropriate what has been learned is indicative of an intelligent child.

---

<sup>8</sup> Bo ma Mukebu Lindunda of Nandopu Village.

<sup>9</sup> Bo ma Lindunda of Nandopu Village.

#### **4.1.1.5. Ability to perform tasks beyond what is expected of one's age**

In response to the question, “*Likezo za mutu wa ngana kize cwani?*” (What kinds of acts are acts of an intelligent person?), Denis said, “*Likezo za kuli, mina mubona kuli mutu yani isali mwanana, kono lika za eza zende ki lika ze kona feela kuezwa ki babahulu*” (Acts such that, the child may still seem to be young, but his/her works or acts can only be performed by adults). Therefore, to know things and ability to carry out works that are beyond your age is intelligence. This further assumes that there are culturally expected abilities for each period (age-range) of childhood.

#### **4.1.1.6. Understanding and ability to listen**

At *Nakasheke* Village, Bo Lubasi shared this for the Lozi concept of intelligence and an intelligent person;

*Mutu ya nani ngana ki mutu ya nani kutwisiso. Ki mutu ya teezeza lika. Ha laelwa ueza mwa bulezwi. Ku twa foo ki mutu ya ikutekile, ki mutu ya nani kutwisiso mi wa latelela milao ya sizo. Ki mutu ya buzanga moku ezezwa lika. Ze li mu paka kuli yo ki mutu wa ngana* (An intelligent person is a person who has understanding. It is a person who listens or pays attention. When he/she is advised, he/she follows the advice. Also it is a person who has self-respect and follows traditional rules and customs. It is a person who asks questions about how things should be done. These attest to the fact that this person is intelligent).

From this conversation intelligence is understood as understanding, ability to listen, and self-respect, adherence to traditional rules and customs and propensity to ask questions.

#### **4.1.1.7. Fear or awareness as intelligence**

Bo Mubyana, the other elderly man at *Nakasheke* village defines wisdom as: “*Temuho ya lika*”- (Fear of things). With this notion of intelligence, Bo Mubyana holds that intelligence or this fear or awareness of things is progressive.

*Kakuli muka fumana kuli mwanana hasali yo muinyani ha sabi lika. Ni haiba noha wa swala. Hasa tahelwa ki ngana wa lemaha lika mo liinezi. Ya sa lemuh i cwalo hana ngana* (Because you will find that a young baby has no fear of things. Even a snake the baby can touch. But as the child becomes aware of how things are, the child is said to become intelligent. A child who does not become aware of how things are is not intelligent).

This suggests that not to fear out of reverence or for biological survival is to be lacking in intelligence.

#### **4.1.1.8. Intelligence as knowledge; swiftness to grasp ideas and cleverness**

At Liyoyelo village I interviewed three female Lozi youth Akayombokwa, Namataa and Namwaka. Of the three, Akayombokwa goes to Limulunga Day Secondary School where she is in Grade Eleven. Namataa goes to the same school but in Grade Ten whereas Namwaka is a Grade Nine drop out of school after a pregnancy. She hopes to return to school after her baby boy, Yamboto, who was born in June this year, grows up.

When I inquired on the Lozi concept of intelligence, each youth had a unique concept which showed different aspects of the same reality. First to respond was Akayombokwa:

*“Ki mutu ya nani zibo, yanani bunangu mwa lika”* (It is a person who has knowledge, who is swift, quick, fast to grasp or comprehend things).

I requested an explanation of “*zibo*” (knowledge). I wondered what Akayombokwa meant by this concept as an attribute of intelligence.

Question: *Kono zibo luba ni yonaka samulaho wa kuituta lika ze lu ziba nji?* (But don’t we acquire knowledge only after a process of learning?).

Answer: *“...Kono kunani zibo yakuipumanela feela, zibo yaku pepwa ni yona; zibo ki butali feela bobuzwa ku mulimu”* (But there is knowledge which we gather on our own; then there is knowledge that we are born with; then there is knowledge which is natural cleverness which God gives us).

#### **4.1.1.9. Intelligence as having an Idea**

I found *Namwaka* very reflective. Perhaps this is as a result of what life has brought to her, the reality of getting pregnant while in Grade 9 and having a baby. I invited her into the conversation and the result of her reflective processing was this response:

*Ki mutu ya nani mu hupulo, mu hupulo wa ku ziba mwa kona ku pilela; ku pila ni batu ni kuipilisa*(An intelligent person is a person who has an idea, an idea about how to live, to live with people and to survive on one’s own).

Question: *“Kanti ku ziba kuipilisa, luituta kona ka kuya kwa sikolo kamba mwa hae?”* (Do we learn to how to survive from school or from home?)

Answer: “*Uipilisa uinzi mwa hae, kaku lima-lima. Hauchala-chala tunto twa hao, hauka kutula peto wa fumanela fateni bupilo*” (You learn to survive from being in the village by growing crops. When you plant crops and harvest, then you find a way to survive).

I wondered if, with this notion, school was necessary at all. But Akayombokwaclarified: “*Kwa tokwahala kuya kwa sikolo. Kono haku palile, unani ku bata mukwa wa kuipilisa ka ona*” (It is necessary to go to school but there are times when school is impossible. Then one has to find a way through which to survive).

While it is possible to survive without having been to school, all my three informants here were in agreement that formal schooling is important. It is only after things fail to work out at the formal school that one needs to come back and use the naturally acquired means to survive. “*Sapili ki kuya kwa sikolo. Haku yo pala cwala cwale kona uyo taha mwa hae ku to bona zeo ukato eza*”. (The first thing is to go to school. When school fails, that is when you come back to the village to see how you can survive).

I deliberately asked a question of comparison between those who have successfully completed their formal education and those who have grown up in the village. But Namwaka spoke convincingly saying: “*Kaufela bona banani ngana. Baba inzi kwa hae, banani ngana yaku ziba mwaku ipiliseza. Baba keni sikolo ni bona banana ngana, kakuli ni bona ba ipilisa*” (All are intelligent. Those in the villages have the intelligence of how to survive on their own. Those who have been to formal school are also intelligent because they survive on their own). This conclusion shows that intelligence is necessary in order to survive. If one can survive

independently without depending on others, then the person survives out of individual intelligence.

While Namwaka was resolved with her position, Akayomboko, on the other hand, perhaps due to the influence of formal education as she at that time was pursuing her formal Secondary School Education at Limulunga Day Secondary School, strongly objected to this concept:

*“Baba inzi mwa ma hae banani ngana ku fita baba keni sikolo. Baba beleka bona ba libelela feela kuli kweli foika felela kona ni ka fumana mali. Cwale baba inzi mwa hae misebezi ye bafa masheleni ki ye minata. Hape ba sebelisa a hulu litho za bona ku nahana ka moba kona kuipiliseza”.* (Those who are in the villages (without formal education) are more intelligent than those who have been to school and now live in cities. Those who work only wait for the month-end to get their salary. But those who live in the villages do many kinds of jobs that can bring them money. In addition, they use their heads (think) a lot to think about how they are going to survive).

There is a point to this judgment. A simple example is the likelihood for someone in the city to use a calculator, for instance, to solve a simple mathematical problem, because it is available whereas the person in the village will solve the same or similar problem using his/her head due to non-availability of resources. In this regard, Akayombokwamade a strong point that the person in the village makes greater use of his/her brain than the learned person in the city.

#### 4.1.2. Village Intelligence vs School Intelligence

Is intelligence categorized into two: “Village” intelligence and/or “School” intelligence?

Namwakahad this to say:

*“Ngana ya kwa sikolo ki ku ziba kuli fa, ni swanela ku bala kuli ni pase hanika nola litatubo. Kuisseza mu hupulo kuli usike wa libala ze uitutile. Kuli haika fita nako ya litatubo u kone ku hupula. Ngana ya kwa hae ki ya kuli ninani ku bona kuli na beleka misebezi ye kona kuni pilisa. Ki ku ziba mo zamaiseza misebezi ya hao kaufela kuli ukone ku fumana bupilo”* (School intelligence is knowing that one has to study hard in order to pass the exams when it is time to write exams. It is keeping in mind the things you learnt so that you don’t forget them. So that when exam time comes, you don’t forget. On the other hand, village intelligence is making sure that that I do the duties necessary for my survival. It is to know how to manage your duties and responsibilities so that you can sustain yourself in life).

There is a clear indication that according to these notions, “School” intelligence implies a lot more of carrying out tasks for a specific purpose. i.e., the exams. It is probable that after the exams are out of the way, what has been learned no longer needs to be kept since it has served its purpose whereas “Village” intelligence entails knowing and keeping up a life long activity that is inseparable from life. It is doing things not simply for an end that comes to pass, but for the life it ensures and sustains.

*“Ya ile kwa sikolo kuli ha sika pila mo mwa hae, hakoni kuipilisa mwa hae. Kakuli zibo ya bupilo bwa mwa hae ha na yona. Kono ya hulezi mwa hae, hayo ituta kwa sikolo wa*

*kona ku pasa. Kono ya sika hulela mwa hae, ha koni kuto ipilisa mwa hae”* (The one who has been to school without having lived in the village cannot survive on his/her own in the village. Because he/she has no knowledge of life in the village but the person who grew up in the village, when he/she goes to learn at school, he/she will pass. But the person who has not grown up in the village cannot survive on his/her own in the village).

This notion here implies that the village life empowers a person with intelligence to undertake difficult challenges, whereas school education is sufficient only for school purposes but it is not sufficient knowledge preparation for survival.

Akayombokwa however observed that *“Li ngana ze zepeli ki zende halikopani. Kona mutu akona ku bani liseli mwakona kuipiliseza”*(The two forms of intelligence are better when they are integrated. That is when a person may have the light of how to survive on his/her own).

#### **4.2. Concepts of intelligence from data collected at Lealui Royal Village- A case of Serendipity**

The researcher chose to visit Lealui on a Sunday so that he could join in at the local peoples’ Sunday morning service. But as things turned out, it ended up working out to the best of the research purpose as the Sunday service gathered lots of elders and youth who would become informants. After the service, I consulted with my research assistant to get her views on using the audience that had gathered for the service for our research purpose of finding out the Lozi peoples’ concept of intelligence. My concern would be that the data I would collect would be cluttered by our experience during the service where they encountered me as a priest. But since

the research assistant also took time to explain to them prior to the service, that I was also visiting with them for research purposes, the gathering was therefore equally curious and anxious to find out and contribute to my research program. In the final analysis, it turned out to be the best sampling of the informants as their membership cut across all dimensions of life, desirable for my research purpose. Among them were Indunas, wives to the Indunas who also carry a certain honour in society, elderly men and women, the youth, boys and girls as well as children. In this regard therefore, we decided to utilize our audience who were very willing to continue interacting with us who had come to visit with them. For more than just the research interview, the local people are grateful for anyone who comes to visit them. They share a sense of being connected to the outside world when visitors from outside come to visit them. Therefore, our continued presence was viewed with great delight.

In order to continue investigating the Lozi concepts of intelligence, informants were asked the principle question, "*From your life and interaction with people of your village, what kind of a person is an ideally intelligent person?*" Where responses seemed to be coloured by the informant relating to the other professional job and title of the researcher, that of a priest, the researcher used some of the subsidiary questions to filter out such biases as well as gender biased responses.

#### **4.2.1. Intelligence as intellectual curiosity expressed through questions about origins of family**

According to Induna Simon Ngenda Luyanga of the Lozi Royal Court at Lealui, intelligence is perceived in two different ways.

The first characteristic of intelligence is the child's desire to explore the origins of life and the origins of the child's family as well as the total composition of the child's family.

*“Lunge ka mutala mwana, muinzi ni yena mina ba shemi ba hae. U mi buza lipuzo, ‘Tate, muzwa kai? Kanti luna luzwa kai? Mu simuluha kai? Kutile cwani kuli luto ipumana mwa sibaka mo?’ Ki peto ona lipuzo ze swana sina zani, kikele mu ziba kuli kanti mwanana yo unani ngana. Ka lipuzo za buza mutu.”<sup>10</sup>* (Let us take for example, the child is seated with you as parents. The child asks you questions, “Dad, where do you come from? Where do we come from? How did it happen that we find ourselves in this place?” By such questions as these, then you know that this child is intelligent).

In addition to this concept of intelligence, an intelligent child also concerns herself/himself with the general wellbeing of the immediate family. This is expressed through family visitations. An intelligent child will make an effort to visit the family members to find out how they are doing. The child brings home the information about how the rest of her/his relatives are doing.

While love and concern for relatives is an indicator of child intelligence, concern for a parent who had travelled is also indicative of the child's intelligence:

*“Mushemi hazamaile, hayo kuta. Peto mwanana yaani wa mbatoka mushemi. Uyo amuhela za shimbile mushemi. Wa kuta uto ina kwatuko wa lumelisa mushemi yaani ni ku buza mushemi mwa zamaezi. Yaani ki ngana”* (When a parent had travelled and returns. The child runs towards the returning parent and takes some of the parent's load. When they have

---

<sup>10</sup> Induna Simon Ngenda

arrived home, the child goes and sits by the parent and greets the parent, finding out how the parent travelled. That is intelligence).<sup>11</sup>

The way of receiving visitors is equally a significant indicator of a child's intelligence. Bo Mukelabai said:

*Mwanana yanani ngana wa ziba ku amuhela baeni. Uka ba amuhela, wa bafa sipula, kona ataha kuto ba lumelisa. Mi ha bapaleli kokuinzi batu.*” (An intelligent child knows how to receive visitors and how to take care of them. An intelligent child will receive a visitor, give him/her a stool to sit on, then come and kneel down before the visitor and greets them. Furthermore, an intelligent child treats with respect the space near and around the visitor).

By these characteristics of relating to a visiting outsider, parents can tell whether the child is intelligent or not. This form of intelligence is acquired from interactive observation of what happens in a home when the household receives a visitor.

#### **4.2.2. Intelligence through the way of being with others**

The second characteristic of intelligence is the way of being with, the way of talking to, and what to say to others. Induna Ngenda said:

---

<sup>11</sup> Induna Ngenda

*“Mwanana yanani ngana, hainzi mwa hali a batu wa ziba kuli, nani mwahala batu. Mi mwa hala batu mo niinzi mo, seni swanela ku bulela ki sika sesi eza kuli, sika lumelelwa ki batu ka mukana. Ku zwa fo mwana ya nani ngana uikutekile, wambola hande ni batu. Ka Silozi luli ki wa maoyo...Mwanana ya nani ngana unani likute leli mu paka kuli wa swanela ku pila ni batu.”<sup>12</sup>* (An intelligent child, while in the company of other people knows that I am in the company of other people. And in this company of people where I am, what I am to say has to be something which is acceptable by everyone present. From there, an intelligent child has self-respect, speaks calmly with people. In Silozi we say such a child is humble and gentle. An intelligent child has self-respect and respect for others. These make such a child fitting to live with other people).



Figure 4.2. Among the Lozi people, it is culturally intelligible that children respect the space where elders are by sitting in their designated space.[Source: Picture by Barnabas Simatende-September 2012]

---

<sup>12</sup> Induna Ngenda

Intelligence is also characterized by the purpose of doing what a child is doing. By the reasons behind what the child does, people can qualify such a child as intelligent or not intelligent.

*“Lunge inge mwanana ha zamaya, is there any purpose ya kuli izamaela life?”* (Let us take for instance when a child is walking or going about. Is there any purpose for the child’s walking or going about?)

In this regard, an intelligent child is not someone who simply wanders about but purposefully moves from one point to another. A child who aimlessly wanders about is not an intelligent child.

Intelligence is attested by the kind of activities a person does, activities which are necessary for the wellbeing of society. Intelligence is not acquired from school. School merely gives us knowledge which we add onto intelligence. *“Let’s take for example inge Lewanika (Lubosi), ni ma activities a ezize mwa Bulozhi mo amande. Kono nasika ya kwa sikolo. Na konile ku kopanya ma fasi amanata ka ngana ya hae. Ma activities a hae mwa hae mo amupaka kuli nanani ngana.”* (Let’s take for example Lewanika (Lubosi) and his activities which he did here in Lozi land which were good. But he did not go to any formal school. He brought together many nations of peoples by his natural intelligence. His activities in this kingdom attest to his intelligence).

### 4.2.3. Responsiveness as intelligence

Another characteristic of intelligence is social responsiveness *Ku Lumeha*<sup>13</sup>. According to Bo Meamui, an intelligent child is responsible and carries out the duties assigned to him/her.

*“Ze talusa kuli mutu inani ngana ki kuli, haumubulelela, fo kumu wa funduka uya kwa Mongu wa mu bulelela kuli niya kwa Mongu mwanaka nangu u apehe busunso, u soke buhobe. Haukuta uto fumana uli ezize. Mane wa mu lumba uli kanti mwanaka yo unani ngana. Ze ni ku bulelela wa li eza.”*<sup>14</sup> (What it means to be intelligent is that if you tell a child, suppose you are travelling to Mongu, you tell the child that ‘I am going to Mongu my child prepare some relish and nshima’. When you return you find that the child has done those things. Then you even praise the child, ‘So my child is intelligent. What I tell you to do, you do’).

An intelligent child is, therefore, the child who adheres to what the parents tell him/her, a child who assists the parents in many ways as a way of learning from them what is essential for survival. An intelligent child in this regard is not only obedient but understanding and effective. Bo Mundia distinguishes between school intelligence that regards what is learnt in school and the intelligence that the child grows up with from home is the kind that is necessary to stay alive.

### 4.2.4. Intelligence is ability to replicate what is perceived

---

<sup>13</sup> Ku Lumeha is a Lozi word for being responsive, reliable.

<sup>14</sup> Bo Meamui

Induna Tungulu of the Barotse Royal Establishment defined an intelligent child as one who is able to imitate by way of replicating what seems new and puzzling. *“Ngana ki mwanana kapa yo muhulu yaba ni ku likanyisa sesi bonahala kuli seo sa komokisa kwa batu. Mo inezi phoni ye, kono yena wa kona kuiswanisa”* (Intelligent is a child or an adult who is able to imitate/ replicate what is perceived, new and puzzling to people. Just the way that phone is, an intelligent child can draw it).

Induna Tungulu expands on this idea by using the examples of clay and a child’s activities of making different kinds of images and objects out of it. The ability to make clear and distinct images out of soft clay is a characteristic of intelligence. *“Aluka inga komu, sifateho sa yona, moizamaela, moibupezwi, moipepezwi. Ibe mwanana wa inga li zupa, wa bupa ona komu yaani. Mane wa bupa ni yena mutu ka sibili”*. (Let us take for example a cow, its face, the way it walks, the way it is built, the way it is born. Then a child takes soft clay and molds the replica of that very cow. Even makes a human being himself/herself).



Figure 4.3. Children playing with replica car toys made out of used containers of local juice drinks and reeds. [Source: Picture by Bamabas Simatende- September, 2013]

By sheer coincidence, Induna Tungulu brought out the exact images brought out by Serpell in his “Panga Muntu” research project (Kathuria & Serpell, 1998). In Serpell’s project, the child’s ability to make a human being with clear and distinct features of a human person was characteristic of an intelligent child.

Another example of this is when children use wires to make things they have perceived in day to day life:

*“Ha lu zamaya halu fita saidi yaale ya Kaoma. Lwa bonanga kuli kunani banana baba eza kuli ba inganga ma waya ale ba ezanga li mota zaale. Luli luli, haluka italima mota yaale ni moota ya bupile mwanana, za swana. Kona kuli mutu yani lu mu beya kuli unani ngana.”<sup>15</sup>* (When we travel around Kaoma area, we see children who will collect some wires and make vehicles out of them. Truly, truly, when you look at a vehicle and the

---

<sup>15</sup> Induna Tungulu

vehicle which the child has made out of wires, they are the same. Then we say that that child is intelligent).

This concept of imitation or replicating what has been perceived is not only in drawing or making vehicles out of wires. It is also found in emulating a way of life that is good for society. “*Yena mutu yaani, hainzi ni baba hulu, ukopisa ze ba eza babahulu. Hakazwa fateni, uyo likanisa zaani za bona ku baba hulu. Peto lu bulela kuli mutu yo unani ngana*”<sup>16</sup>. (The child while in the presence of the elders, copies what the elders do. When he/she leaves the company of elders, she/he goes and lives out what he/she has learnt from the elders. So we say that such a person is intelligent).

Similarly, Bo Mubyana shared that intelligence is having the ability and desire to learn from others what is perceived. “*Muka fumana kuli totumu hatu hohoba ni kona ka yema kuli ka likanise zeka bona. Kabata ngana ye zekabona*”<sup>17</sup>. (We will find that when the other babies are crawling, an intelligent baby will also try to imitate them crawling. It wants that intelligence). Learning is not just by perceiving but by attempting what is perceived. Participation in a desired activity is a sign that a child is intelligent and leads the child to higher progressive levels of intelligence.

#### **4.2.5. Intelligence as ability to master what has been taught**

According to *Induna Lingomba*, intelligence is the child’s ability to master and remember what the parents teach him/her. “*Fokunwi, mwa mu bonisa kuli eza se. Muka bona asa si libala. Wa*

---

<sup>16</sup> Induna Tungulu

<sup>17</sup> Induna Tungulu

*eza. Fo luli mwanana yo unani ngana*<sup>18</sup>. (Sometimes you show a child what to do. He/she will never forget. He/she does it. Then we say the child is intelligent). This concept of intelligence is characterized by the child's ability to remember. In this regard, therefore, the retention level of a child determines the child's degree of intelligence. According to this position, a child who remembers all that he has seen and shown is intelligent.

On the other hand, knowledge builds on intelligence. Induna Lingombasaid that all human beings are born with a degree of intelligence. But this intelligence is activated through either informal or formal instructions. For instance, when a child is born, a child does not fear fire or a snake. But after a child has been told of the dangers of either one of them, the child now manifests that knowledge by abstaining from those two dangers. The ability to comprehend instructions is inborn intelligence which all people possess. The ability to retain and the levels of retention of received instructions are what determine intelligence.

#### **4.2.6. *Bunangu*<sup>19</sup> - ability to grasp things swiftly**

Induna Lingomba also highlighted swiftness of comprehension as intelligence. "*Bunangu italusa mutu ya swala lika kaubebe*" (*Bunangu* means swiftness to grasp things). An intelligent child is therefore, swift to grasp what is taught or what is being shown to the child. The rate of this swiftness is arrived at in comparison to others in a group. Through comparison in this aspect, the degrees of intelligence, based on the characteristic of intelligence as swiftness, is arrived at.

---

<sup>18</sup> Induna Lingomba

<sup>19</sup> Lozi word for swiftness

#### 4.2.7. Initiative as intelligence

Bo ma Mundia Namasiku Mundia defined intelligence as characterized by the child's initiative to perform his/her chores and duties without any instruction from anyone. This indicates that the child has internalized values necessary for familial and social wellbeing.

Question: What characteristics of intelligence would you use to refer to one child as intelligent and the other as not?

Answer: *“Lu bonaga ka misebezi. Yanani ngana yena wa kona kuikupuza ku sebeza. Mane wa kona ku nanula ngongolo uyo ka mezi kusina ya mu bulelezi. Hape wa inga lu fiyelo wa fiyela wa kenisa u tapisa mi pika ni mikeke ku sina ya mu bulelezi. Wa toma poto fa liso ya busunso, wa tateha akuna ya mu bulelezi. Ki peto kele u bona kuli, mwanana yo unani ngana”<sup>20</sup>*. (We see by the works of the child. An intelligent child reminds herself/himself to work. The child will carry a bucket and goes to draw water without being told. Then she/he takes a broom and sweeps the yard and cleans pots and plates without anyone telling him/her. The child puts a pot on the fire for relish and cooks without anyone telling him/her. This way you are able to tell that this child is intelligent).

A child learns these duties and chores by observing what the parents do and from social interactions with peers. *“Haiba ki to twa sishimani. Hamukayo kumbuluka ke ka anga lutaka ni ku inatanatela bi waya-waya ka beya kwa lutaka lwani peto kaya kwa mezi kayo taba-taba tu tapi. Peto ke mu bona kuli mwanana yo kanti unani ngana”<sup>21</sup>* (If it is for the boys. While you don't realize it, he gets a reed, shapes out some wire and puts it onto the reed and heads to the waters and spears some fish. Then you are able to tell that this child is intelligent).

---

<sup>20</sup> Bo ma Mundia Namasiku Mundia

<sup>21</sup> Bo ma Mundia Namasiku Mundia

While the boy child takes the initiative to collect firewood to be used in cooking the family meals, the girl child equally attends to other chores such as pounding maize or millet into mealie-meal for *Nshima*. The child's ability to execute the acquired skill out of his/her own initiative is conceived as a sign of intelligence.

#### **4.2.8. Respect, sincerity and adherence to parents**

An intelligent child is one who has respect and adheres to the parents and any adult. An intelligent child is characterized by sincerity, honesty and truthfulness. Furthermore, an intelligent child embraces his/her responsibilities and happily carries them out without being forced by anyone. According to Bo Edith Namwaka Mukatimui, "*Mwanana ya nani ngana unani kuuwela wena mushemi wa hae. Sa bu beli ki kuli ka ikupulisa musebezi wa kona*". (An intelligent child listens and respects the parents. An intelligent child also takes initiative to perform its duties without being told). According to the Lozi culture, respect is expressed in several ways. However, what is unique of the Lozi expressions of respect are two characteristics: kneeling down before another person of a different age when greeting them; and clapping one's hands when greeting them. There is also a gender distinction in the ways of clapping. The clap by women and girls produces a heavier sound due to the way in which they are expected to cup their hands. On the contrary, the clap by men and boys produces a slightly lighter sound also due to the way in which they must culturally cup their hands as well. All in all, these two impressions need to accompany a greeting and are a measure of respect and intelligence of a person, for to be intelligent is to realize these distinctions.

#### **4.2.9. Cleverness, (Butali), and Knowledge, (Zibo), as intelligence**

Richard Mukatimui Mututwa, another elderly man of Lealui Royal village, defined intelligence as cleverness and ability to know and understand how things operate. “*Ngana ki mutu ya nani zibo ni butali bwa ku ziba kuli lika ze li zamaya cwana.*”<sup>22</sup> (Intelligence is having knowledge and cleverness to know and understand how things go).

A clever child will grasp things before they are fully explained. Once the clever child conceives of the idea, the child uses that conceived idea to figure out things in life.

#### **4.2.10. Kindness and Social Responsibility as intelligence**

Still among the Lozi people of Western province, the intelligence of a child is also assessed by the child’s sense of social responsibility. This is in the care of the wellbeing of others. In some respect, it is called kindness. If a child is kind and acts kindly to those to whom acts of kindness need to be shown, then a child is said to be intelligent. As Bo Edith Namwaka Mukatimui observed, “*Kunani ngana ya sishemo. Mutu ha fumana ya palezwi, hamu amuhela hande ni ku ambola hande ni yena. Peto lu bona kuli mwanana yo unani ngana*”<sup>23</sup> (Kindness is also intelligent. When a child finds someone who has some health difficulty, receives the struggling person and talks to them properly, then we say that that child is intelligent). Intelligence here borders on concern for others and taking care of them.

#### **4.2.11. Intelligence as being reliable when sent- “Ku Lumeha”**

---

<sup>22</sup> Bo Richard Mukatimui Mututwa

<sup>23</sup> Edith Namwaka Mukatimui

If a child can reliably be sent and does exactly what is asked of him/her, then it is said that that particular child is intelligent. An example is given of a girl child for instance. If a girl is sent to adults and conducts herself according to what is traditionally expected of her, then that child is said to be intelligent.

*“Ka nako ya licho. Ba shemi bainzi faale. Peto mwanana ba mu luma bali isa licho ze. Ki peto wa ya, uyo kubama wa kambelela. Ki peto wa ziba kuli mwanana yo unani ngana”*

(If it is meal time, the parents are seated. Then the child is called and sent to take the food to the parents. The child collects the food, goes to the parent, kneels down and claps (as a sign of respect). Then you know that this child is intelligent).

If a child is sent and runs immediately and brings what he/she was sent to go and do or collect, then we say that child is intelligent. To be sent is to be entrusted with a responsibility. To be entrusted with a responsibility is to be trusted. A person who does as he/she is told is said to be intelligent.

#### **4.2.12. Desire to fulfill what parents desired to fulfill**

While everybody is born with intelligence, intelligence has levels. An intelligent child is one who has the desire to learn things that are helpful in life. For example, if parents send that child, as an intelligent child, he/she has the desire to fulfill the intentions of the parents. According to **Bo Nyambe**, *“Mwanana yanani ngana unani takazo yaku taleleza takazo ya bashemi ba hae”*. (An intelligent child has a desire to fulfill the will and intention of the parents). When the child has grasped the parents’ dream or hope in life, which could be either for the parent, for the child or generally for society at large, an intelligent child is noted by how he/she embraces and seeks

to realize the dream that the parents had in life. Ability to realize a dream and to work towards its realization is characteristic of an intelligent child.

#### **4.2.13. Ability to survive on one's own**

While formal education imparts some knowledge to a child, according to Bo Sharon InongeAkufuna, an intelligent child on the other hand is one who does not just depend on school input to survive. "*Mwanana ya nani ngana ki mwanana ya kona kuipilisa ni hasika ya kwa sikolo*" (An intelligent child is one who can survive on his/her own even if he/she has not acquired any formal education). To survive is to possess especially farming and fishing skills which are necessary for an ordinary livelihood of the Lozi people in Zambezi Plains of Western Zambia.

#### **4.2.14. Intelligence as Stability of heart**

According to Bo Muyapekwa Nyambeof Naloko village West of Lealui, an intelligent child is one who has a stable heart and does not easily drift away under the influence of others. "*Mwanana ya nani ngana hana muyembuluko wa ku yauluka*" (An intelligent child does not easily drift from one position or direction to another). Such a child is reliable, can be trusted and entrusted with family responsibilities of caring for his/her siblings in the absence of his/her parents.

### **Adherence to Social Roles**

**Girls:** According to Lozi tradition, an intelligent girl is one who attends to her daily chores with little or no reminders from the parents. When a girl has learnt her responsibilities and willingly

begins to take them up without any influence or push from any parent, then a girl is said to be intelligent. According to Bo Edith Mukatimui,

*“Ka misebezi mwa lapa. Wa pakela ka kusasa, wa fiyela-fiyela, waka tu mezi, wa anga tu keke wa tapisa. Peto luli mwanana yo unani ngana”* (By the works the child performs: She wakes up early in the morning, sweeps the area, draws some water and gets the plates and washes them. Then we say that this girl is intelligent).

**Boys:** On the other hand, the intelligence of a boy child is realized by what the boy wakes up to do. An intelligent boy (for those with cows), will wake up, goes straight to the kraal to make sure things are fine with the cattle. This is a sign of responsibility on his part. As Bo Edith Mukatumui notes, *“Kwa bana babashimani, yaeza ha zuha kakusasana wa pakela* (inge bale baba lisa likomu), *uyo nangela kwa mulaka. Hayo kuta uli nizo bona ze ni ze. Ki ngana”* (For the boys, one who wakes up early in the morning (for those who own cows), goes to the kraal. When he comes back he brings a report over what he saw at the kraal. That is intelligence).

#### **4.3. Examination Council of Zambia (ECZ) Special Paper One and Two**

The Examination Council of Zambia (ECZ) administers Special Paper One and Two examination papers, among other exam papers, to Grade Seven candidates for admission to Grade Eight. Special Paper One and Two are used as a measure of the candidate's level of intelligence. The results from these two papers determine the candidates' suitability for Secondary school education. Special Paper One and Two are cognitive tests that require a candidate to complete either a word, letters, picture or numerical sequence according to a syllogistic order.

From as far back as 1973, the Examinations Council of Zambia, (ECZ) has been using Special Paper One & Two tests as the major selection criterion for candidates to Grade VIII or Form I. The 1973 Annual Psychological Service Report highlights that approximately 800 items arranged in 16 pretest papers were pretested on a representative sample of pupils in eight out of the nine educational regions. Pretest papers for Special Paper Two were administered to David Kaunda and Hillcrest Technical Secondary Schools to examine the predictive value of the paper. The pretest study showed that the results of the selection battery Special Paper Two correlated highest with Form III technical subjects (Metalwork, Woodwork and Technical Drawing). It had the highest correlation with Technical Drawing ( $r = .54$  correlated for attenuation) (Annual Report, 1973). By this analysis, Special Paper Two was validated as a more useful predictor for success in technical courses than Grade VII English, Mathematics or verbal reasoning. After item analysis, suitable items were added to the Item Bank (Annual Report, 1973). Essentially, Special Paper Two, a non-verbal reasoning test is designed using a Psychological measure of intelligence known as *Raven's Progressive Matrices*.

### **Raven's Progressive Matrices**

The *Progressive Matrices* tests were developed by J. C. Raven in his quest to measure the intelligence of a child. Raven had been working with a geneticist, Lionel Penrose, on a study of the genetic and the environmental origins of mental defect when he subsequently developed the matrices which became known as Raven's Progressive Matrices. In the testing, adults as well as children had to be tested. Those to be tested were often illiterate and thus unable to follow written

instructions. But they also had to be tested in homes, schools, and workplaces which were often noisy, thus making oral questioning difficult (Raven, 2008).

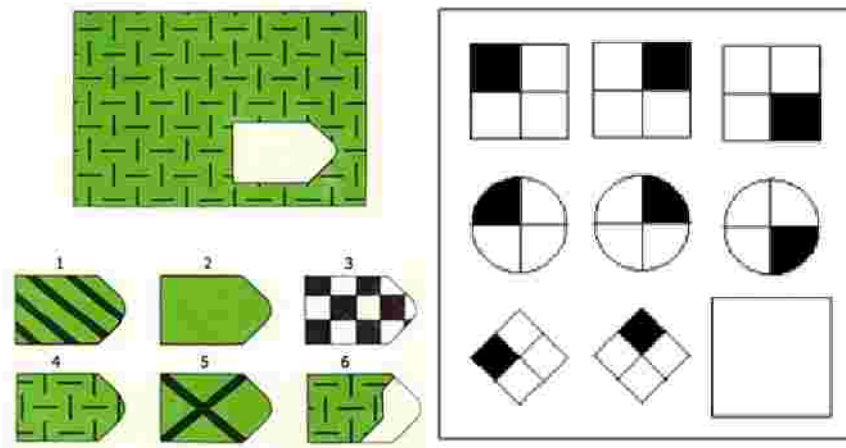


Figure 4.4. Matrix examples.

[Source: [http://www.sevencounties.org/poc/view\\_doc.php?type=doc&id=8221&cn=18](http://www.sevencounties.org/poc/view_doc.php?type=doc&id=8221&cn=18); Accessed on May 31, 2013]

According to ECZ, Special Paper One and Two are aptitude composite examinations which are compulsory and are used for selection purposes. ECZ holds that as long as a child has been exposed to formal schooling, (Grade One to Seven), then the child possesses ability to undertake Special Paper One & Two examinations, whose score will determine the child's suitability for higher schooling.

From ECZ, a draft copy of verbal and non-verbal reasoning specification table interpreting the actual 2011 Special Paper One & Two categorized questions in the two papers was as follows:

Content	Processing Skills						No. of Items
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	
Alphabetical Order			6				6
Analogy		5					5
Always Has	5						5
Letter Series				4			4
Letter Number Series				4			4
Number Series				4			4
Word Opposite	5						5
Odd One Out	5						5
Problem Solving					5	3	5
Word pattern				4			4
<b>Total</b>	<b>15</b>	<b>5</b>	<b>6</b>	<b>16</b>	<b>5</b>	<b>3</b>	<b>50</b>

Formatted: Font: 11 pt, Not Bold, English (United States)

Formatted: Font: 11 pt

Table 4.5.

The table above indicates that, for example, in the category of Problem solving, there were five questions testing the candidate's ability to Synthesize and three questions testing the candidate's ability to evaluate.

Although ECZ has been using this method to identify intelligent children, and accord them opportunities to enter into Secondary school, ECZ acknowledges concerns over whether the concept of intelligence which Special Paper One and Two helps them to establish is also reflected in the traditional concept of intelligence (Teza, 2012).

The other concern ECZ raised is whether the established means of measuring the child's intelligence corresponds to the current societal life pattern.

#### **4.4. Perception of Grade VII School Teachers about Special paper One & Two**

In order to administer Grade Seven Composite examinations, it is important that Grade Seven School teachers are in line in their teaching with the knowledge which the examinations intend to yield.

#### **Reality of primary school teachers in Mongu**

While gender sensitivity is a principle which could not be ignored, the researcher was left with no options but to overlook it by the reality of Primary School teachers on the ground. Of the three Basic Schools visited both in Limulunga and Mongu town itself, none of them had any male teachers teaching Grade Seven. Of the schools visited, all teachers of Grade Seven were women. At Mongu Basic School itself, of the 57 School Teachers, only two were male (the Head Teacher and one Senior Teacher)! In this regard therefore, I had to do with what was available, confining my inquiry to the essence of the study.

Question: "As you administer Special Paper One and Two, what are the characteristics or qualities of intelligence that you want to explore through those subjects?"

Answer: "The focus is on how the child connects ideas. Some questions search the child's ability to connect things in other subjects like Literacy or Numerous Mathematics. We focus on the

critical thinking of the child. Special Paper Two normally deals with intelligence, in terms of how fast a child is in, maybe, arranging or rearranging”<sup>24</sup>

The table below shows a summary of perceptions of Grade VII school teachers about Special paper one & two.

Pecial Papers One & Two measure:
Ü Intelligence through ability to add or to subtract
Ü Intelligence through ability to make visual connections
Ü Intelligence through noticing the difference
Ü Special Paper One and Two also measure general knowledge
Ü Special Paper One & Two explore reasoning capacity of a child
Ü Special Paper One & Two measure the ability to realize sequence and patterns
Ü Ability to Solve Problems
Ü Measures the ability to recall, comprehend and apply
Ü Measures the child’s Swiftness to grasp things “ <i>Bunangu</i> ”

Table. 4.6.

#### **4.4.1. Intelligence through ability to add or to subtract**

Special Paper One and Two deals both with the English Language and Mathematics. Mrs. Kapalu observed:“For instance, in Special Paper Two, there are some mathematics questions where a child will be required maybe to subtract certain things. Certain questions will require a child to add things. In this way Special Paper Two is examining the child’s ability to add and subtract things.”

#### **4.4.2. Intelligence through ability to make visual connections**

---

<sup>24</sup> Interview with Rebecca Chipango Kapalu

In addition to just Literacy and Mathematics, Mrs. Kabwebwe noted:“Special Paper Two deals with their visual. There are certain questions in Special PaperTwo which look at their sight and how they can connect items. If a child has visual problems, it will be difficult for the child to know what is happening with the question. With good visual connection ability, they are able to see that here the sequence is going this way; here it is this thing which is missing. This way we are able to see if the child’s visual connection is ok, because it affects the child’s intelligence”.

#### **4.4.3. Intelligence through noticing the difference**

In Special Paper One, the test seeks to find out if the child is able to notice the difference between things,Mrs. Kapalu said: “The child will be asked to notice the opposites by relating them to a certain aspect. If a child is able to notice the difference, then we know that this child is intelligent”.

#### **4.4.4. Special PaperOne and Twoalso measure general knowledge**

Mrs. Kapalu continued: “In fact, these subjects are like general knowledge. It starts from what they know such as in Special Paper Onequestions like: ‘A man is to a woman as a hen is to....’ This is general knowledge of what they know from their homes and what we teach them from Grade one”. In this regard, regardless of where the child hails from, the Grade Seven child is expected to have acquired some general knowledge into how things work and how they should be.

Grade Seven pupils are taught things that add onto what they have already known from their homes. The teachers observed that there is no syllabus for either Special Paper One or Two. It is general knowledge. All that teachers try to do is to add onto, on what the pupil comes with from home. Some questions will be in forms of games. Even though games may look foreign to the child in Special Paper One and Two, they are similar to some games the children play at home. For example, according to Mrs. Kapalu again: “Some questions explore the child’s ability to connect items, for example on village games called *Mulabalaba* and *Nsolo*. *Mulabalaba* is about seeing the possible connections, preventing them from happening or making them happen. *Mulabalaba* creates gaps to be filled up or forces a child to see where the child needs to close before the opponent closes and wins”. (cf. figure 4.7 and figure 4.8).



Figure 4.7. and figure 4.8. Melody Kasoma Kabwebwe demonstrating the game of Mulabalaba. [Source: Barnabas Simatende- September, 2013]

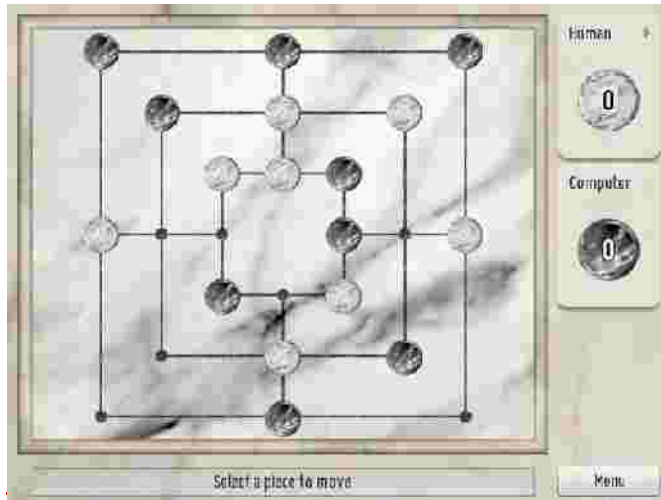


Figure 4.9. The computerised board of Mulabalaba.

Special Paper One and Two, therefore, seek to explore the child's ability to make logical connections to many things. According to the Grade Seven school teachers at Mongu Basic School, ability to make logical connections and to think critically is explored through various items and images. They acknowledged, however, that certain images or items are not always familiar to every part of the nation. As Mrs. Melody Kasoma Kabwebwe observed: "In the same questions there are some which are biased and don't favour our children in the remotest villages who have not been exposed to some modern technologies such as computers, television, etc." The justification given is that such biased or discriminative questions are normally very few so that they would not significantly influence the results. At the same time, teachers noted that there are also Special Paper One and Two questions which are rural or village focused and do not favour the children who grow up in towns. Some of such question would be about hunting or drawing water from a well. In this regard, the pupils are given equal challenges.

#### **4.4.5. Special Paper One & Two explore reasoning capacity of a child**

According to Mrs. Kalimukwa, a senior teacher at Limulunga Basic School and a seasoned Grade Seven school teacher, Special Papers One and Two tests the thinking capacity of a child. Since there is no syllabus for Grade Seven, children are, therefore, not expected to come into the exam with some mastered knowledge or to remember anything. Before Grade Eight evolved to be what it currently is, after examinations, the examination papers would be burnt or shredded in order that there would be no learning material for Grade Eight exams. Special Papers One and Two, test not what is taught, as there is nothing of its nature to be taught in Grade Eight. Instead, they test the natural thinking level of a child. “We test because we want to see how far they know not what they have learnt”, said Mrs. Kalimukwa.

#### **4.4.6. Special Paper One & Two measure the ability to realize sequence and patterns**

Grade Seven Special Papers One and Two exams test the extent to which a child is able to realize sequences and patterns and the ability to complete the perceived patterns.

#### **4.4.7. Ability to Solve Problems**

Another measure characteristic of Special Paper One & Two is to draw out of the child, his/her ability to solve situational problems. In these two exams, children are presented with various problems for them to solve. The ability to solve the presented problems and the total number of problems correctly solved are indicative of the child's level of intelligence.

#### **4.4.8. Measures the ability to recall, comprehend and apply**

According to the two Grade Seven school teachers at Limulunga Basic School, Special Papers One and Two is categorized into six levels or skills. Each level focuses on an aspect of the child's intelligence. Level one of Special Paper Two measures knowledge. Questions in this level of Special Paper Two expect a child to apply only one skill, that of recalling.

Level two of Special Paper Two tests the child's comprehension levels. Here a child is expected to recall and understand.

Level three of Special Paper Two requires the child to apply. After recalling and comprehending, the child is then expected to apply what he/she has recalled and understood.

These three skills of recalling, comprehension and application are tested by Special Paper Two. According to Mrs. Kabubi, a child is presented with a situation. "Through a situation, three components of a child's intelligence are tested: whether the child is able to recall any item in the presented problem that could serve as a clue to the solution; whether the child understands the problem itself; and finally, how the child can apply the recalled clues to solve a presented problem. The child's ability to combine these to arrive at a desirable solution is a measure of a child's intelligence".

Teachers at Limulunga Basic School also observed that there are two other levels: analysis and synthesis. Through the analysis level, a child analyzes a situation or a given problem. Through the level of synthesis, a child is able to break down ideas to come up with one greater idea which is the solution to the situation.

According to Mrs. Kalimukwa and Mrs. Kabubi, these levels or skills measure the intelligence of a child. They further attest that intelligence is different from knowledge. Whereas knowledge comes from what one is taught, they both note that intelligence comes naturally. Special Papers One and Two essentially measure the intelligence of a child and less of the child's knowledge. They measure the child's ability to solve problems.

Similarly, the two teachers observed that imaginary situations presented in the two exams (Special Papers One and Two) are somehow related to the child's real life experiences. For example in questions asking for comparisons, "*Haiba kuli mwanana, lika zeo nali bonanga, peto wa kona ku ziba sesi shutana*" (If a child has seen and lived with the items used in the question, then he/she will know which one is different).

In addition, the questions of sequencing relate to a home life environment where even at home, children know the order of sizes of things beginning with the smallest to the biggest or from the biggest to the smallest.

#### **4.4.9. Measures the child's Swiftness to grasp things "*Bunangu*"**

In the first instance, a ten letter word could be made and numbers are assigned to represent each letter in the word. In the second sequence, a shorter word but made out of letters from the ten letter word is created. Then a child is asked to state the combination of numbers according to the newly created word. This type of a question tests the child's swiftness to grasp what is in question. The Lozi word for swiftness to grasp is *Bunangu*.

The two Grade Seven school teachers at Limulunga basic observed that environmental differences do play a role in the children's cognitive development. An example is cited that a child growing up in the city has higher chances of learning English than a child growing up in Lealui, for example. When they come to face the same questions especially in Special Paper One, questions that are related to English, a child growing up in the city is at an advantage relative to the child growing up in Lealui. Technology is another factor of imbalance between the city child and the village child. A child growing up in the city is exposed to a computer for example whereas not even a teacher in Mongu District would have the knowledge of how a computer functions. Such and other exposures disadvantage those growing up in the villages as they have to face the same examination.

Thus, the data presented in this chapter reveal the researcher's finding on: the Lozi concepts of intelligence, what is assessed as intelligence by Grade Seven Composite examinations (in particular Special Papers One & Two), and what a small convenience sample of Grade Seven school teachers understand of Special Papers One & Two examination papers. In the following chapter the researcher will discuss and analyse these findings in greater detail.

## **CHAPTER FIVE: DISCUSSION AND ANALYSIS OF RESEARCH FINDINGS**

The various theories of intelligence outlined in the previous chapters are glimpses of what intelligence could be perceived to be. The Lozi people of Western Zambia have their concepts of intelligence influenced by their social and economic cultural values, and their historical background as well as their geographical location. These local concepts of intelligence will be weighed against the Grade VII Special Paper One & Two measure of child intelligence and vice versa.

### **5.1. The Lozi Concept of Intelligence**

The Lozi people of Western Zambia pride themselves in observing a very strong tradition among the seven major tribes in Zambia. They are a people who migrated into Western Zambia fleeing the early 19<sup>th</sup> Century wars in the Southern-most end of Africa. They came to settle in the Zambezi flood plains of Western Zambia, an area that experiences annual seasonal floods when

the Zambezi River overflows due to seasonal rains. As such, they seasonally grow rice, keep cattle and carry out significant fishing activities especially during the seasonal floods.

Because of their geographical location and their economic activities' connectedness to water, they earned for themselves the name **Luyana**. Luyana is a name that stems from the word **Luyi**, which means **River**. Hence, they were originally known as “**the people of the river**” or “**the people of the water**”.



Figure 5.1. Lozi pupils crossing a flood stream on their way to school- *[Picture Source: Barnabas Simatende, taken during research, (September, 2012)]*



Figure 5.2. Fishing activity on the Zambezi flood waters. [Source: Picture by Bamabas Simatende- March 2013]

Their concepts of intelligence are, therefore, characterized by their geographical location that is characterized by seasonal floods which in turn influences their traditional cultural values and their social economic activities. As a tribe that upholds stronger cultural traditions and traditional leadership, I considered them for my research as they would have more authentic and traditional concepts of intelligence pertaining to their tradition.

In the discussion of the research findings, the researcher will categories them into: Natural (innate) Intelligence (*Ngana tanu*) and Acquired Intelligence (*Ngana takuwanina*) which will comprise Social-Family Responsibility, Economic Independence vs Dependence, and Academic Cognitive Ability.

### 5.1.1. Natural (innate) Intelligence(Ngana Tanu)

This concept of intelligence highlights that a child is naturally born with intelligence. My research indicates that the source of this intelligence is God and that God gives us the intelligence which we are born with, as Bo Lubasi said:

*“Ngana tanu ki ngana mwanana a pepwa ni yona. Ki Ngana ya lu file mulimu”.* (This is the intelligence a child is born with. It is the intelligence God gives us and we are born with it).

According to this concept, *Ngana tanu* is distributed differently. To some is given more, to others less. Those to whom more natural intelligence is given are called talented. They are listened to, respected and entrusted with leadership roles and responsibility. But those with less are looked down upon when interacting with others. Even in the area of play, one with less *Ngana tanu* is assigned lower grade roles while the one with more is given higher roles: *“Habaya kwa mandwani, yani ya nani ngana tanu yeinyani yena ba mu biza Luwawa. Kono yani ya nani ngana tanu ye ng’ata, yena bamu biza kuli kiyena muna munzi. Ki yena ya ka zamaisa munzi kaufela”* (When they are at play, the child with less *Ngana tanu* will be assigned as a Fox in the play-village. But the one with more *Ngana tanu* will be assigned as the village headman who will preside over the whole village). This recognizes the various degrees of natural intelligence and is promoted as such.

From hence, it is peculiar how it is distinguished who has more or less *Ngana tanu*. Research highlights determining factors that point to the variation of the degrees of *Ngana tanu* and *Ngana*

*takuwanina*. According to Bo Lubasi's hierarchical distinctions of *Ngana tanu* contained under footnote 1 of Research Presentation, even at field of play, children are categorized by how this *Ngana tanu* is manifested through play. The manner of speaking and behaviour indicates to others the level or degree of *Ngana tanu* a child has. As such, the one who is assigned as the village headman is a child whom others have seen to have natural knowledge of things, respects himself and others, is responsible and acts more mature than others. Whereas the one who would be assigned for instance, as a fox, would be a child who is like a thief. This nature is manifested through violent acts while playing and interacting with other.

What is therefore evident in these responses is that the character that is manifested through acts is an attribute that provides insight into the child's degree of intelligence that comes naturally. The way a child speaks and interacts with others is indicative of the degree of the natural intelligence (*Nganatanu*) which a child is born with. As the Aristotelian- Thomistic philosophical notion goes, *Agere Sequitur Esse* (action follows being). In other words, our actions stem from the nature of our being. We act from the nature and composition of our being. Since being is a given, *Ngana tanu* which is part of our natural being (before formal education), is manifested through our physical actions. In this regard, therefore, other people can assess what we are by nature and hence determine our intelligence as it is naturally found in us.

Similarly, while Gardner argues that there are several types of intelligence, he recognizes that each of them has a unique biological basis, a distinct course of development, different expert or "end-state," performances (Gardner, 1998a; Torff & Gardner, 1999). In his theory of the various forms of intelligence, he calls this inert intelligence or *Ngana Tanu* as raw material and

emphasizes that a long process of education is required to transform any raw potential into a mature social role or into actualization (Gardner, 1998a; Torff & Gardner, 1999). Gardner accepts the existence of innately specified, core cognitive process, present at birth or emerging early in life (Berk, 2003). This means that as children respond to the demands of their culture, they transform and combines the intelligence to fit the activities they are called on to perform. Consequently this means that cultural values and learning opportunities have a great deal to do with the extent to which a child's strengths are realized and the ways they are expressed. This form or type of intelligence is, therefore, not acquired from school. School may merely activate its existence and give it avenues to manifest and grow.

According to this concept of intelligence, intelligence is not acquired from school. School merely gives us knowledge which activates intelligence.

*“Let's take for example inge Lewanika (Lubosi), ni ma activities a ezize mwa Bulozzi mo amande. Kono nasika ya kwa sikolo. Na konile ku kopanya ma fasi amanata ka ngana ya hae. Ma activities a hae mwa hae mo amupaka kuli nanani ngana”<sup>25</sup>* (Let's take for example Lewanika (Lubosi) and his activities which he did here in Lozi land which were good. But he did not go to any formal school. He brought together many nations of peoples by his natural intelligence. His activities in this kingdom attest to his intelligence).

Acts of love, peace, unity and harmony are therefore intelligent acts that manifest a person's natural intelligence which they are born with. These are acts that foster the wellbeing of others in society. They are acts that promote the progress of peoples. They are acts that seek the good of

---

<sup>25</sup> Induna Tungulu

the individual and the good of others the common good. Environmental conditions and school opportunities will cultivate and transform them into actuality.

In this regard, therefore, it can be argued that there is no child who is born without a degree of intelligence that is biologically inborn. All people are born with some degree of intelligence that allows them to immediately cope with their immediate environment. In animals this may exist on the level of instincts. But on humans, this is *Ngana tanu* or Natural/Biological intelligence.

### **5.1.2. Acquired Intelligence (*Ngana takuwanina*)**

As children grow, interact with others and attend school, they also acquire another kind of intelligence which the informants in the present study called *Ngana takuwanina* (acquired intelligence).

According to Bo Lubasi, “*Ngana takuwanina ki ngana ye lu fumana mwa libuka ni ka ku pila ni batu*” (Intelligence gathered/collected/acquired is the kind that we find from school in books and from other people). The Lozi people distinguish a second category of intelligence as that which we gather, collect or acquire from our learning either in formal schooling or through interaction with other people. This they call *Ngana takuwanina*.

The concept of *Ngana takuwanina* accounts for the fact that forces influence what the *Ngana tanuor* what the child is born with by either improving or destroying what the child is born with or creating a totally new form of intelligence. Some of the factors that affect the *Ngana takuwanina* are Heredity, Environment, Social Class and Ethnic Differences.

### **Heredity**

Heredity affects intellectual performance and a percentage of the variation in IQ scores within a particular population of test takers is due to genetic differences among those individuals (Shaffer, & Kipp, 2007). This notion of heredity indicates that depending on their parents and parents' genetic makeup, children are born with certain characteristics of intelligence which they inherit from their parents. As they grow and interact with others, society, school and environment, those characteristics either get positive stimulation which actuates them or get negative stimulation that keeps them dormant and or destroys them. This notion holds that some children will not acquire certain characteristics or forms of intelligence because they are not genetically predisposed to them. For example, a child who has a genetic predisposition or has inherited Gardner's Musical type of intelligence would struggle to develop Naturalistic type of intelligence. However, the significant long-term effects of one's genotype on behavioural characteristics such as intelligence, personality, and mental health depend on one's environment (Shaffer, & Kipp, 2007). In other words, heredity alone does not determine what levels or degree of intelligence a child develops. Environment significantly contributes to the intellectual, physical, emotional, social, and spiritual development of a child.

### **Environment**

The environment in which a child is raised contributes positively or negatively to the realization of inherited genes. For instance, a child who has a genetic predisposition to seek out intellectual challenges could hardly be expected to develop a high IQ if she/he is raised in a barren environment that offers few such challenges. Alternatively, a child who does not gravitate towards intellectual activities might nevertheless obtain an average or above average IQ if raised in a stimulating environment that continually provides her with cognitive challenges that she/he must master (Shaffer, & Kipp, 2007). Research has shown that “there is a small to moderate intellectual resemblance between pairs of genetically unrelated children who live in the same household, a resemblance that can only be attributable to their common rearing environment because they share no genes” (Shaffer, & Kipp, 2007). Similarly, adoption studies show that there is a positive or negative influence environment imparts to adopted children.

In this regard therefore, the quality or character of the home environment plays an important role in determining how *Ngana tanu* develops.

### **Social-Class and Ethnic Differences in IQ**

Similarly, *Ngana Takuwanina* is affected or influenced by social class and ethnic differences. According to research, children from lower and working class homes averaged some 10 to 15 points below their middle class age mates on standardized IQ (Helms, 1997). At the same time, other researches that highlights ethnic differences in what becomes of *Ngana Tanu* show that in the United States, for instance, children of African American and Native American origins score an average of 12 to 15 below their European American classmates on IQ tests. Similarly, Asian American children score about the same level or slightly higher on IQ tests than European American children (Flynn, 1991; Neisser et al., 1996). This implies that different ethnic groups

come with particular predisposition to how their intelligence can develop. For instance, research has shown that, for example, African American children often perform better on verbal tests than on other nonverbal tests whereas Hispanic Americans and Native American children may do particularly well on nonverbal tests (Neisser et al., 1996; Suzuki & Valencia, 1997).

The few highlighted research findings point to the fact that ethnicity does characterize the intelligence of a child which is further shaped by other observed external factors.

Heredity, environment, social and ethnic differences and other factors (both external and internal), influence how the intelligence of a child develops and what the child is capable of acquiring through interaction with opportunities that foster intelligence. These factors, therefore, contribute to the character, quality and nature of *Ngana takuwanina*.

From my research among the Lozi in Mongu, *Ngana tanu* is distinguished from *Ngana takuwanina* where *Ngana Tanu* is what is naturally given, biologically innate or 'talent', and *Ngana takuwanina* is what we acquire by interacting with everything within and around us. These two concepts of intelligence are either independent of each other and/or the second builds upon the first, implying that *Ngana tanu* is the bedrock foundation upon which *Ngana takuwanina* is built. According to these concepts, it can be argued that every human being has *Ngana tanu* upon which to build up to higher levels of intelligence. In this regard therefore, every person has capacity for intelligence even before or without formal education.

The research findings indicate that there are essentially three possible sources or influencing environments for how *Ngana tanu* develops through *Ngana takuwanina*. *Ngana takuwanina* is acquired formally and informally. The formal process of acquiring *Ngana takuwanina* is through formal education or formal schooling which the Lozi people call *Kwa Sikolo*. On the other hand, the informal way of acquiring *Ngana takuwanina* is through the natural social village interactive authorities which the Lozi people call *Kwa hae*. The third source of *Ngana takuwanina* is the combination or integration of *Kwa Sikolo* and *Kwa hae*. The third form implies that what is taught at school recognizes and embraces what is taught at the village or vice-versa. My findings show that there is a distinction between what the two roles influence. The first source of intelligence is *Kwa hae*. According to this research, *Ngana takuwanina* acquired from *Kwa hae* is essentially about survival. It is the kind of intelligence the child would need in order to survive even if he/she was to have life alone. As Akayombokwa who was then enrolled in Grade Eleven at Limulunga Secondary School, observed, “*Ngana ya kwa hae ki ya kuli ninani ku bona kuli na beleka misebezi ye kona kunipilisa*” (Village intelligence is to ensure that I possess the kind of knowledge and am able to perform the kind of tasks that are essential for survival). By virtue of it ensuring that a person can survive on their own, simply by the possession of this ‘village intelligence’ or intelligence acquired from *Kwa hae*, my research among the Lozi people showed a more natural inclination towards this form of intelligence than to the school intelligence. In my conversation with Akayombokwa, she indicated that a person who gains only school intelligence without village intelligence cannot survive in the village: “*Ya ile kwa sikolo kuli ha sika pila mo mwa hae, ha koni kui pillisa mwa hae. Kakuli zibo ya bupilo bwa mwa hae ha na yona*”.

The second source or influence on intelligence is the school (Kwa Sikolo). While it was the perception of my informants, my findings show that school acquired intelligence is limited as it is oriented only at passing examinations. In this regard, it does not persist after school examinations. “*Ngana ya kwa Sikolo ki ku ziba kuli fa ni swanela ku bala kuli ni pase ha ni ka nola litatubo*” Akayombokwa. According to this concept, school intelligence is oriented towards passing examinations. So the lifespan of a person who acquires this intelligence is the examination time. As soon as the examinations are out of the way and the child passes the examinations, it is of less importance to possess this kind of intelligence or knowledge. In this regard therefore, the Lozi people would prefer intelligence from *Kwa hae* as it persists through life and lasts a lifetime.

Comparing the two kinds of *Ngana takuwanina* (*Kwa hae* and *Kwa Sikolo*), the Lozi people I interviewed shared that they prefer *Ngana takuwanina* that comes from *Kwa hae* as it subsists through life. Similarly, Inonge also observed that “*Ya ile kwa sikolo kuli ha sika pila mo mwa hae, ha konikuipilisa mo mwa hae*”, (The person who goes to school and acquires school intelligence but has not acquired intelligence from *Kwa Hae*, cannot survive in the village). My informants agreed that while it is true that a person who only acquires school intelligence without any exposure to *Kwa hae* intelligence cannot survive alone in the village. While they hold this to be true, they also held that a person who grows up and acquires *Ngana takuwanina* from *Kwa hae* has better chances to excel in school: “*Kono ya hulezimwa hae, hayo ituta kwa sikolo wa kona ku pasa*” (But the person who grows up and acquires *Ngana tanukwanina* from *Kwa hae* can equally acquire *Ngana takuwanina* from *Kwa Sikolo* and pass or excel. This understanding implies that *Kwa hae* and its life empowers a person with intelligence to undertake

difficult challenges. In other words, it endows a person with survival skills. On the other hand, school education is sufficient only for school purposes, precisely for passing examinations.

Nevertheless, my findings also show that one form of knowledge is not totally sufficient by itself. Hence, according to the number of people I interviewed, they held that the ideal source of *Ngana takuwanina* is the integration of the two sources formal (*Kwa Sikolo*) and Informal (*Kwa Hae*). “*Li ngana ze zepeli ki zende halikopana, kona mutu ha kona kuba ni liseli mwa kona kui piliseza*” Akayombokwa, (When the two forms of intelligence integrate, a person will then be enlightened and can survive). This notion calls forth the two forms of knowledge, *Kwa Sikolo* and *Kwa Hae*, to recognize the contributions each makes towards promoting a more active intelligence. To emphasize one and neglect the other is to risk losing out on the value that the other brings to holistic and integrated human development.

As the Lozi people emphasize *Ngana takuwanina* acquired especially from *Kwa hae*, I found that most if not all Lozi characteristics or concepts of intelligence which were revealed to me during my research among the Lozis, fall under the following categories: Social-family Responsibility, Economic independence and Academic cognitive ability. Consequently, I will discuss them in this order.

#### **5.1.2.1. Social-Family Responsibility**

Under this category of intelligence, there are several concepts which I will now discuss. These are: Desire or curiosity expressed through questions about origins of family; way of being with others; social responsibility as characteristic of intelligence; responsiveness as intelligence.

### **5.1.2.1.1. Intelligence as intellectual curiosity expressed through questions**

#### **about origins of family**

In the interview Induna Simon Ngenda Luyanga of the Lozi Royal Court in Lealui, asserted that intelligence is perceived in two different ways the first is the child's desire to explore or the child's intellectual curiosity through questions of the origins of life and the origins of the child's family as well as the total composition of the child's family. As children develop their cognitive abilities, one of the preoccupations of an intelligent child is a desire to explore his/her origin. This recognizes the fact that everything that is has its origin, destination and future or end. An intelligent child does not take for granted his/her being. He or she explores not just the origins of his/her life but the life of the family which forms society. This inquiry is twofold:

- i). It explores the historical background of the family to its present moment;
- ii). It explores the origins of humanity at large.

A child who does not take existence for granted is perceived to be intelligent.

The second way of assessing a child's intelligence is how much a child concerns herself/himself with the general wellbeing of the immediate family. This is expressed through family visitations. An intelligent child will make an effort to visit the family members to find out how they are doing. The child brings back home the information about how the rest of her/his relatives are doing. While love and concern for relatives is an indicator of child intelligence, concern for a parent who had travelled is also indicative of the child's intelligence. According to my interview with Induna Ngenda (footnote #3), an intelligent child will run towards the approaching parent, carry off some of the load, in itself a sign of respect, and then journey with the parent for the

remaining part of the few steps to the home. When they reach home, an intelligent child will go to sit by the returned parent and greet him/her finding out how the parent travelled. According to Induna Ngenda, this kind of behaviour is intelligent behaviour.

Carrying off the load or some of the parent's or any visitor's load is not only indicative of intelligence but a sign of respect which equally indicates a degree of intelligence. To share the load of a returning or arriving expected visitor is a sign of welcoming which is equally a sign of respect and intelligence. To not receive a returning parent or an expected visitor this way is indicative of lack of love and concern for family and others, lack of respect and not being intelligent. Ultimately, this points to the fact of embracing not only a shared family love but acquired social intelligence from social interaction with immediate family.

Similarly the intelligent way to greet a returning parent or an expected visitor is with the respect of sitting down by them and greeting them properly. The proper greeting does not only explore the immediate reality of how the person is or feeling. The intelligent greeting of a returning parent or arrived expected visitor explores the whole travel process from where it began and how it progressed. To simply acknowledge that a person has arrived and look only at that is to have a shallow grasp of *Ngana takuwanina*. The intelligent greeting explores the complete journey from its inception to its conclusion. A child who shows that comprehension manifests intelligence.

Furthermore, an intelligent child treats with respect the space near and around the visitor or a parent. The space where parents or visitors sit is intelligently treated with respect. What this means in the Lozi culture is that an intelligent child does not just pass across in front or behind

the space near where the visitor or parent is seated. After greeting them, an intelligent child will leave the space and get to the appropriate chores that look to the needs of the returned parent or expected visitor. By these characteristics of relating to a returning parent or an expected visitor or relative, it can be determined whether the child is intelligent or not. These characteristics of intelligence are acquired (*Ngana Takuwanina*) from interactive observations of what happens in a home when the household receives a visitor or at the return of a family member.

#### **5.1.2.1.2. Way of being with others as characteristic of intelligence**

Intelligence is the way of being with, the way of talking to, and what to talk about to others. This concept is highlighted by Induna Ngendawhen he said, "...*Mwanana ya nani ngana hainzi mwa hali a batu, wa ziba kuli Imwahali a batu...unani likuta leli mu paka kuli wa swanela ku pila ni batu*" (An intelligent child when in the presence of others knows that he/she is in the presence of others and behaves according to what is expected of behaving in the company of others... has respect that qualifies and witnesses to his/her readiness to live with other people). Induna Ngendarecognized established intelligent social interactive ways of being with and relating with others who may be peer or of different ages. In Lozi cultural traditions, other people demand or create a certain way of being with them. As established in most African countries, a person attains a fuller identity as a person only when he/she relates with others. In other words, other human beings act as mirrors to provide each person an individual identity which is what it is through its existence in communion with others. As the Zulu people of South Africa say, "*U muntu ngu muntu ngabantu*" (A person is a person by other persons). This takes into

consideration the significant role other people play in shaping what develops of a growing person. In this regard, an intelligent child is one who can distinguish the company he/she is in and the social demands of that company. As the company of other people fosters a degree of self-knowledge, self-worth and self-recognition, how a child conducts himself/herself in the company of others is a significant window into the quality of child intelligence. Besides simply adhering to social and cultural expectations, interaction with other people also serves as an opportunity to assert oneself against the public. Confidence, self-awareness of cognitive abilities, is manifested through a person's interaction with other people from all walks of life.

In this regard, therefore, an intelligent child is a child who recognizes the company of others and how to appropriately relate to them. This also requires an awareness of the culturally acceptable ways of interacting with others. How much a child is aware (*Ngana takuwanina*) of the appropriate way to be and relate to others is characteristic of an intelligent child.

This concept of intelligence counters that of the "expert" concept of intelligence which excludes social and emotional attributes claiming that they obscure important technical distinctions between cognition and motivation, ability and disposition and between general competence and special talents (Serpell, 2000).

Intelligence is also characterized by the purpose of the child's actions whether alone or in the company of others. An intelligent child does things for a well processed purpose that shares in a family and or cultural way of being. A child who for instance drifts aimlessly with other drifters is considered less or not intelligent. An intelligent child is purposeful in his/her actions.

Furthermore, intelligence is attested by the kind of activities a child engages in, activities which are necessary for the wellbeing of society. According to this conceptual characteristic of intelligence, intelligent activities should be aimed at the good of humanity, not just the good of the individual. As the Lozi people value communal life style, manifested through such Lozi proverbs as “*Lubana ba mba*” (We are children of the stomach), meaning that regardless of our different parenthood, as the Lozi people, we are children of one family. Here the meaning of stomach is stretched to mean more than one literal stomach but humanity that is conceived and born of the womb of a woman. Intelligent acts must therefore promote the values of communal peace, unity and the general wellbeing of this one family that forms a society. A child who seeks the common good of society is therefore perceived to be an intelligent child.

#### **5.1.2.1.3. Social responsibility as characteristic of intelligence**

My research among the Lozi people of Western Zambia shows that love, concern for others and desire to learn from others are characteristics of an intelligent child. An example of this is highlighted by Bo ma Lindunda’s example of her granddaughters who, upon waking up early in the morning, greet the grandparents singling them out each by name.<sup>26</sup>

In the same vein a boy child is known to grow up with intelligence if he manifests willingness and a desire to learn from elders. Bo Ma Lindunda highlighted this characteristic of intelligence as the child’s ability to embrace and imitate activities which are undertaken by parents. Boys particularly would imitate and seek to participate in activities of the male parent. Bo Ma Lindunda gives examples of a child who accompanies the grandfather who goes hunting or to the

---

<sup>26</sup> See footnote # 2 under Chapter four

fields as characteristic of an intelligent child.<sup>27</sup>The desire to learn through active participation and the realization of the need to learn so that knowledge can be passed onto them is characteristic of an intelligent child. Depending on how willing and ready a child is to participate and learn from activities engaged in by parents (which is a manifestation of intelligence), children are assigned vegetable beds for them to take care of. An intelligent child will learn from adults what to do and will strive to do just what the parents are doing in order to produce similar or same results as the child's parents. A child who actively seeks to learn through active participation and by emulating those who are older is intelligent. This is similar to Rogoff and Serpell's concept of Participatory Appropriation. According to Rogoff, people develop as they participate in and contribute to cultural activities that they themselves develop with the involvement of people in successive generations (Rogoff, 2003). And according to Serpell developmental change within such a context involves participatory appropriation. Through participatory appropriation, children engage in a cultural activity as novices first and then develop by means of appropriating the system of meanings that inform the activity (Serpell, 2008). Ability to appropriate what has been learned is indicative of an intelligent child whereas lack of willingness to join in activities which are undertaken by parents may be seen as laziness and could signal less intelligence. Willingness to undertake such activities is seen as characteristic of intelligence that is manifested by the child's willingness to learn by participation.

#### **5.1.2.1.4. Responsiveness/reliability as intelligence**

---

<sup>27</sup> See footnote # 3 under Chapter Four

According to Bo Meamui,(footnote # 8), an intelligent child is responsible and carries out the duties assigned to him/her. The Lozi word for responsiveness is “*Ku Lumeha*”.*Ku lumeha* implies that the child is reliable to be sent or to be asked to perform an act or a chore. *Ku lumeha* also signifies trustworthiness. It is a common African practice like among the Lozi people for elders to send younger people to take or collect something on their behalf. While for a child to be sent is to do an adult a favour, it is also recognition of the child’s sense of trustworthiness. A child who hears what is asked of him/her and does it according to given instructions, is not only respectful, responsive (*lumeha*) and reliable but in this regard, embodies characteristics of an intelligent child. This concept was similarly realized in Serpell’s research among the Chewa people of Eastern Zambia. According to Serpell, a key concept for describing the socially responsible dimension of intelligence in Chi-Chewa is –*tumikira*. A child, who is *wo-tumikira*, is reliable both because he or she can understand the demands of the task and is a cooperative (Serpell, 1993). Such shared concepts could be indicative of certain common concepts of intelligence that could be found in most African cultures.

An equally significant characteristic of intelligence is the ability of a child to stay focused on an assigned task or errand. To do otherwise or to choose to be distracted along the way is to lack a single focus. An example of this is found in Bo Muyapekwa Nyambe’s observation, “*Mwanana ya nani ngana hana muyembuluko wa ku yauluka*” (An intelligent child does not easily drift away). Such a child is reliable, can be trusted and entrusted with family responsibilities of caring for his/her siblings in the absence of his/her parents. A person who would easily be derailed or distracted from his/her focus is not intelligent because lacks a single goal and is, therefore, not reliable.

Like in many Zambian cultures, in the Lozi culture, younger people can be sent for an errand by any well-meaning adult. As earlier indicated, while the child being sent for an errand is doing a favour for the person sending him/her, in itself, to be sent is to have one's qualities of reliability, trustworthiness and responsiveness recognized by the person sending him/her. Therefore, among children, a child who is sent for an errand is seen to be responsible, reliable, trustworthy and *lumeha*. Hence, while it is a task to be sent to perform an errand, at the same time, it is also a criterion that is used to distinguish levels of responsiveness as well. In this regard, more responsive (*lumeha*) children will be assigned sensitive chores whereas less responsive (*lumeha*) children are assigned less sensitive chores. By itself, this distinguishes more responsive (*lumeha*), hence more intelligent children from less responsive (*lumeha*) and hence, less intelligent children. This said, these acts of distinguishing children's intelligence through roles and tasks assigned to them also serve as motivation for those perceived to be less responsive (*lumeha*) to cultivate their responsiveness. It serves as an assessment of responsiveness which at the same time motivates the "less responsive" to build those characteristics which according to *Ngana tanu*, it is assumed that all children have.

#### **5.1.2.1.5. Respectfulness (Likute/Maoyo)**

According to *Induna Ngen da* (footnote #6), an intelligent child is one who has a deep sense of respect that precedes him/her. "*Ka Silozi luli ki wa maoyo...Mwanana ya nani ngana unani likute leli mu paka kuli wa swanela ku pila ni batu*". Respect is a significant characteristic of the Lozi concept of intelligence. Similarly, Denis, a Lozi youth of Limulungu shared in this notion when he said in si Lozi, "*Mwanana ya nani ngana kiya nani likute kwa bashemi ba hae ni kwa*

*batu kaufela*. (An intelligent child is one who has respect for his parents and all other people). In a research study conducted by Serpell among the Chewa youth, respectfulness and compassion were considered even more important than intelligence (1993, p. 57). For the Tonga of Southern Zambia, not to have respect is to not be intelligent, as they say, “*Imuntu unyina bulemu tako maano*” (A person without respect is not intelligent).

Like in many countries and societies, culture commands behavioural values and ways of being with others that are acceptable to a given society. Similarly, the Lozi people have their unique cultural ways of manifesting respect to others. What is significantly visible is the clapping of hands that accompanies every greeting or a mere response especially to a person that is older. In addition to hand clapping that is distinctive according to gender difference, another manifestation of respect is through the gesture of kneeling before elders. According to this research, if a child is sent before elders, an intelligent child will go and kneel before elders as he/she passes on the message to the elders. To not show respect by kneeling before elders is characteristic of not being intelligent. This is an acquired practice that is particular to Lozi people though it is equally exercised by many other Zambian cultures.

Whereas it is expected of any child to show this respect, a sign of intelligence to the child's parents, respects equally expected and must be shown to every adult and peers.

#### **5.1.2.1.6. Kindness as intelligence**

The Bemba people of Northern Zambia have among many proverbs, one that says, “*Mayo mpapa naine nkakupapa*”(Mother, carry me on your back for I will also carry you). The

interpretative meaning of this proverb is that the kindness that is shown by a mother to a child when the child is still an infant (i.e. that of carrying the child on the back), will be shown back to the mother when the mother ages and becomes weakly. The significant meaning of this proverb is that the Bemba people recognize that as people grow, their strength weakens. As their strength weakens they become dependent on those who in turn have become strong. This and many other African values help to instill an attitude of kindness in members of society so that they take care of one another when the other weakens. In this regard, kindness and the natural realization that others need us as much as we need them, is intelligence. Among the Lozi people, kindness is not only a characteristic of intelligence but a separate form of intelligence. According to Bo Edith Namwaka Mukatimui, (Footnote #12), she observed that there is another form of being intelligent that is known as kindness 'Sishemo'. She illustrated this concept by the following example, "*Kunani ngana ya sishemo. Mutu ha fumana ya palezwi, hamu amuhela hande ni ku ambola hande ni yena. Peto lu bona kuli mwanana yo unani ngana*" (There is also intelligence which is kindness. When a child finds someone who has some health difficulty, receives the struggling person and talks to them properly, then we say that that child is intelligent). In this regard, the Lozi people value and uphold respect and kindness more than intellectual intelligence. This acknowledges the contributive power kindness plays to intelligence. Along with kindness is the concept of 'having a heart', otherwise known in Lozi as '*Ku bani pilu*'. To have a heart is to be accommodating, tolerant, considerate and all-embracing to people and experiences of different natures, some of which could be pleasant, some not pleasant. To an extent, a person with a heart has a capacity to embrace many things. Such a person is considered intelligent.

Kindness and kind attitudes are acquired characteristics of intelligence more from social interaction with immediate family and other people in society than from school the setup. For the Lozi people, if a child is kind and acts kindly, then a child is said to be intelligent.

Given that it is in our nature as human beings to feel for those who struggle and lack ability to stand on their own, to have concern for such is to be fully human. A child who manifests such kind concern towards others is fully intelligently human and alive to human reality around him/her.

#### **5.1.2.1.7. Understanding (*Kutwisiso*)/Self-respect (*Kuikuteka*)/Listening**

##### **(*Teeleza*) and following the tradition of the parents**

The concept of intelligence as characterized by understanding, self-respect and obedience to tradition was brought out by Bo Lubasi of a small village in the flood plains of Limulunga. Similar to, but broader than the English concept of Understanding, *Kutwisiso* encompasses such concepts as being considerate, kind, supportive, tolerant, etc. A child who understands others and life situations is said to possess characteristics of intelligence.

An intelligent child is a child who respects himself/herself as he or she is. This entails having a sense of self-worth, pride and individual confidence in his/her nature. A child who possesses self-respect will have a respectful attitude towards others. Self-respect in turn will command respect from others. Hence, as earlier indicated, respect, both self-respect and the respect which is earned by self-respect are characteristic of intelligence.

Another characteristic of an intelligent child is one who listens- *ku teeleza*<sup>28</sup>. A child who listens hears what he/she needs to hear. The Lozi tradition also recognizes that it takes a person with a heart to listen. And a heart is symbolic of depth and broadness of being. To have a heart entails that a child is capable of absorbing so much before they can break. A child who listens and embraces values of the parents is characteristic of an intelligent child. While it is possible to hear without listening, the Lozi recognize and uphold deep listening capabilities which they consider to be characteristic of intelligence.

Similarly, listening is indicative of respectfulness. Implicitly, to listen is to show respect to the person being listened to. Therefore, a child who listens possesses a respectful attitude when paying heed to the person he/she is listening to. And in this regard, respect for self and others is characteristic of an intelligent child.

Above all, listening leads a child to realize and embrace traditional values. An intelligent child embraces traditional and cultural values not out of force or duty but after the person identifies with and makes oneself part of those traditional cultural values and perceives them to be good in themselves.

#### **5.1.2.2. Economic Independence**

The geographical characteristic of the land inhabited by the Lozi people experiences seasonal flood as a result of water spilling over from the Zambezi River that runs through the area. The Zambezi river provides the people with water for all domestic purposes and fish for their dietary

---

<sup>28</sup> Lozi word for Listening

needs. The river is also used as a transport network for connecting remote villages to one another. The spill-over waters create flood plains which form a rich base for agricultural activities. The Lozi people grow rice in the flood plains which is offloaded and sold across the whole nation. The special rice grown out of the flood plains of Western Zambia has earned for itself the name of 'Mongu Rice', after the Provincial Headquarters of Western Province- Mongu. During the floods, villages and people are cut off from many social activities. For instance, children struggle to get to school except through canoes. Hospitals are less accessible and business activities across the waters are reduced.

In this set up, the traditional culture promotes survival skills that are intended to reduce an individual's economic dependence. Hence, characteristics of intelligence are coloured by the child's ability to embrace values that are taught and promoted in this context. In the light of these economic values, intelligence is conceived as follows:

#### **5.1.2.2.1. Ability to survive on one's own**

As earlier alluded to, life among the Lozi depends on economic activities of farming and fishing that are characterized by the geographical influences of the Zambezi river and the seasonal floods that deposit both fish and good soil for farming activities. Intelligence is therefore seen as one's ability to survive through these circumstances. This implies having knowledge of things that are necessary in order to survive and having an aptitude to engage with them for survival. Principally, this is knowledge and ability to engage in economic activities that ensure economic independence. According to the example by Boma Lindunda (footnotes #2 & #3 in Chapter four), an intelligent child is one who can grow his or her own rice. After harvest, an intelligent child

will look at what has been harvested. After harvest, he/she takes time to plan around what he/she got from the field. The whole essence is self-dependency. According to the example, the harvest is divided into three portions - 1/3 is sold, 1/3 for human consumption and 1/3 for seed. From the harvested rice, the person sells some of it and buys a *chitenge* or t-shirt. These two items (Chitenge and T-Shirt), signify a recognition of the need to be clothed as the Lozi society considers a naked person to lack normal senses and is therefore considered to be abnormal. With clothing ensured, a share of the produce is used for consumption. The other third of the produce is reserved for seeds for the next season. The third category ensures continuity and is a forward-looking approach to life as it recognizes the need to prepare for a future. A person who plans for a future which is beyond today is intelligent. In this example therefore, intelligence is the ability to recognize an acceptable means of survival, to participate in it and plan one's life around what an individual has produced by his/her own effort.

This research asserts that this characteristic of intelligence is not acquired from formal schooling. Initially it belongs to the realm of *Ngana tanu*, (Natural/inert intelligence) and is activated through social village interactions that promote participatory appropriation. As Boma Lindunda noted, "*Ka ngana ya hae, mutu wa fumana zatokwa kaufela, neba hasika kena sikolo*" (By this own intelligence, a person fends for himself/herself and survives even without having gone to school). According to this concept of intelligence, the Lozi culture argues that a person does not need to go for formal schooling to realize this characteristic of intelligence. As a matter of fact, it was observed that even though a person can go to school, passes well and completes his/her school with good certificates, the intelligence they acquire from their schooling does not compare to this characteristic of intelligence that ensures economic independence. Boma

Lindunda symbolically illustrated; “...yaale yaeza kuli yena uzwezi mwa Grade Five kapa Grade Six cwalo...haswala muhuma wa hae, ki yena ndatahe ki yena mahe wa kwa pata”, (...but the person who drops out of school either in Grade Five or Grade Six, when he/she holds a hoe, he/she becomes the father and/or the mother of the future). This concept challenges the idea that to be schooled or to acquire formal school qualification is to be intelligent. A person can get the highest form of education but still not be able to survive on his/her own. According to this Lozi concept of intelligence a person who can survive on his/her own is intelligent, hence, dependable in society. While this emphasizes the significance of the village contribution to child intelligence, this notion does not totally disregard the positive influence of formal schooling as it teaches how to read and count money that is used even in the village set up.

While there can be various means of survival, the Lozi cultural notion of surviving does not include connotations of stealing or forcefully getting or acquiring things from others in order to survive. Ability to survive as a characteristic of intelligence is understood in the sense of recognizing and utilizing the naturally available means of survival such as growing crops or fishing, which are principal economic activities of the Western province of Zambia. The ability to successfully engage in these activities is acquired through participatory appropriation.

### **5.1.2.3. Academic cognitive power**

Several Lozi notions of intelligence under this category relate to the ideas of schooling. These are concepts that pertain more to intellectual cognitive ability than to relating with others.

#### **5.1.2.3.1. Desire to learn what is intelligible**

According to Lozi concepts of intelligence, an intelligent child is a child who has and manifests a desire to learn. Desire to learn is discerned through questions a child asks of the parents. In this regard, a child does not take things for granted. An intelligent child is curious about how things came to be and why things are the way they are. He or she asks questions that pertain to human existence and the existence of whatever is. This shows that the child is an intelligent child because the child explores his/her surrounding and seeks purpose and meaning to what is. To ask questions with a desire to learn is indicative not only of the child's cognitive capability but of intelligence in wanting to know. To want to know or to have expressed a desire to learn is to be intelligent.

#### **5.1.2.3.2. “*Bunangu*”- ability to grasp things swiftly**

In conversing with a Lozi Induna Lingomba (a traditional leader of the Lozi Royal Court), he highlights swiftness of comprehension as intelligence when he said, “*Bunangu italusa mutu ya swala lika kaubebe*”(Bunangu means a person who grasps things swiftly). This concept of intelligence is similarly shared by Akayombokwa, a Lozi youth who was, at the time of the research, enrolled in formal school at Limulunga Day School. Therefore, an intelligent child is swift to grasp what is taught or what is being shown to him/her. When a number of children are shown how something works or how to perform a task, a child who grasps what is being taught with greater swiftness is considered more intelligent than others. Even though this measure of intelligence can be arrived at by assessing a single child's capacity to grasp things swiftly it is easily realized through comparison with other children. This measure is also related to social responsibility as in most cases what could be explained would tend to pertain to a social responsibility or to a task that ultimately would enhance the child's life and or that of society at

large. The swiftness of grasp in comparison to other children is an indicator of an intelligent child. Consequently this implies that those children who do not grasp things swiftly are of less intelligence than those who grasp things swiftly.

The child's swiftness of grasp is closely dependent on the child's ability to listen and the quality of listening itself. As has earlier been highlighted, listening is a necessary quality or characteristic of intelligence. Listening does not only imply respect to the person speaking but is an avenue of collecting and processing data that informs the child about what is being said or taught. The child who listens attentively grasps things swiftly. This ability is dependent on the degree of inert (natural) intelligence. If a child has less of *Ngana tanu*, even attentive listening will only yield grasping of only a certain percentage of the whole communication.

While '*Ngana*' and '*zibo*' are Lozi concepts that are loosely used interchangeably, they are conceptually different. Whereas *ngana* is mostly natural intelligence (*Ngana tanu*), categorically, *zibo* is knowledge that is acquired. The common perceivable source of *zibo* is formal schooling. However, my research shows a further distinction of the sources of *zibo*. According to Akayombokwa, "...*Kono kunani zibo yakuipumanela feela, zibo yaku pepwa ni yona; zibo ki butali feela bobuzwa ku mulimu*" (There is knowledge/*zibo* which we gather on our own; then there is knowledge/*zibo* that we are born with; then there is knowledge/*zibo* which is natural cleverness which God gives us). This identifies three main sources of knowledge or *zibo*: from informal social interactions with others and environment, biologically imbued, and finally knowledge or *zibo* from God.

An intelligent child is, therefore, one who acquires knowledge/*zibo* with greater swiftness than other children of the same age, social and economic background.

#### **5.1.2.3.3. Ability to master what has been taught**

This concept of intelligence was brought to light by Induna Lingomba of the Barotse Royal Court. According to Induna Lingomba, an intelligent child is one who is able to grasp and master through remembering what was taught by parents. In the quotation from Induna Tungulu (see footnote #12), Induna distinguishes that an intelligent child when shown how to do something, grasps the idea, masters it and is able to repeat the act with exactness. This concept of intelligence acknowledges the child's ability to remember. In other words, the degree of retention determines the child's degree of intelligence. According to this position, a child who remembers all that he/she has seen or was taught is intelligent.

Even though this form of intelligence is acquired, Induna Lingomba, like other informants, argued that all people are born with a degree of intelligence which has been referred to as *Ngana tanu*. But this intelligence is activated through either informal or formal instructions. Induna Lingomba used another example of the child's process of coming to fear danger as a way of acquiring this characteristic of intelligence. The example found in footnote #12 in chapter four shows the child's ability to listen, grasp and master the information that is acquired through informal learning process. The child then lets the acquired and mastered information guide his/her life. Consequently, the child lives with an awareness of danger and is able to abstain from it.

The ability to comprehend instructions though varying in degrees is innate intelligence which all people possess. The ability to retain and the degree of retention of received instructions are what determine intelligence. According to the Lozi people, an intelligent child masters what is taught and is able to reproduce it as taught. In this regard, an intelligent child has a good memory that retains what the child was taught, formally or informally.

#### **5.1.2.3.4. Intelligence is ability to replicate what is perceived**

Induna Tungulu of the Barotse Royal Establishment views intelligence as ability to imitate by way of replicating what seems new and puzzling. In a conversation with Induna Tungulu (see footnote #s 11, #12 & #13), he characterizes intelligence as a child or an adult who is able to imitate/ replicate what is perceived, that which is new and puzzling to people. To illustrate this concept of intelligence, Induna Tungulu used the example of children's' creative play activities with clay that given some soft clay, an intelligent child is one who is able to create out of clay mortar an image of what the child has seen or imagined. Induna Tungulu calls this ability to make clear and distinct images of perceived reality out of soft clay, intelligence. Among the example images he used were those of molding a cow and molding a human being with clear and distinctive features that are distinctive of a cow and a human being.

Among the Lozi children who grow up in the traditional village set up, childhood play activities are characterized by playing, especially with soft clay. As such their mode of creative learning or expression is easily manifested through what they create using soft clay. In this regard therefore,

it occurred to Induna Tungulu to acknowledge these visible natural childhood activities that characterizes child intelligence.

Another example of this creative characteristic of intelligence highlighted by Induna Tungulu is when the children use wires to make things they have perceived in day to day life. Wires are another mode of learning through which children manifest their acquired knowledge and intelligence. In footnote #11 of chapter four, Induna Tungulu shares an example of how an intelligent child is able to replicate an image of a perceived vehicle using wires. Making objects out of wires is similarly noted in Serpell's research among the Chewa of Eastern Province (Serpell, p. 68. 1993).

All these examples show that the Lozi people consider a child to be intelligent who is able to replicate what he/she has perceived using available means of play i.e., *soft clay* and *wires*. While these materials of expression are generally used by both boys and girls, girls tend to use more of soft clay mortar whereas boys tend to use more of wires.

Beyond creating things, this concept is equally manifested by a toddler who upon seeing other toddlers standing, equally attempts to do the same. Furthermore, it was noted that while in the company of elders, a child will learn the good things that elders do and later live them out when with other children. A child who seeks the company of elders to learn from them and thereafter models his/her life on what is learned is intelligent.

Ultimately, this concept highlights that intelligence is grasping the idea of what is perceived or imagined and replicating it as closely as possible, bringing out distinctive features that make it what it is. The more a child can bring out the details of what is perceived in the replica object, the more intelligent the child is.

#### **5.1.2.3.5. Intelligence as having an Idea**

Another concept of intelligence which I gathered from a group of three Grade 9 Lozi school girls on school holidays in their rural village of Liyoyelo in Mongu is that of having an idea about something. Namwaka, a very reflective Grade 9 school dropout due to a pregnancy, shared that an intelligent person is a person who has an idea, an idea about how to live with people and how to survive on one's own. This notion of having an idea further points to the ability to survive by engaging in the local farming and fishing activities. Ultimately, to be intelligent in this regard is to possess an understanding of how one can survive first of all on his/her own and secondly with other people. Being with other people connotes not taking advantage of them but contributing to their wellbeing and that of society at large.

#### **5.1.2.3.6. Initiative as intelligence**

Throughout the process of upbringing, children learn values that are essential for wellness and survival. The process of abstraction is such that values are initially perceived and abstracted from outside. Gradually, however, a child internalizes perceived values. In this regard, an intelligent child is one who is able to utilize internalized ideas without being told or reminded. Boma Mundia Namasiku Mundia (see footnote #16), further illustrates that an intelligent child shows initiative and is able to apply acquired values without external influences of parents or adult

figures. Such values could be carrying out daily chores such as drawing water, sweeping the yard around the house, cleaning dishes and even cooking for the family without the instruction of an adult person. Embraced values are acquired through observing what parents do and through social interaction with peers. This manifestation of acquired intelligence through initiative is characteristic of an intelligent child.

This research shows that initiative is further characterized by distinctive gender roles and functions required of boys and girls to participate in in society. The Lozi culture like many Zambian cultures assigns particular chores to be carried out by girls and other chores to be carried out by boys. While chores of fetching water, cleaning dishes, sweeping the house yard, pounding maize or millet for mealie-meal and cooking are generally assigned to girls, boys on the other hand are assigned chores such as collecting firewood, taking care of cattle, fishing, and even hunting. An intelligent boy child, as Bo Mundia notes, (see footnote #17), will get a reed, shape out a wire and put it onto the reed thereby making a fishing rod and head to the waters and spear some fish for the family.

Ability to show initiative is significant of how much of the embraced values the child is able to retain without any outside influence. To show initiative is therefore characteristic of child intelligence.

#### **5.1.2.3.7. Cleverness (*Butali*<sup>29</sup>) and Knowledge (*Zibo*<sup>30</sup>) as intelligence**

---

<sup>29</sup> Lozi word for cleverness

<sup>30</sup> Lozi word for knowledge

Among the Lozi people, a child who is clever (*ku talifa*) and shows possession of knowledge is qualified as an intelligent child. According to Bo Richard Mukatimui Mututwa (Footnote #18 chapter four), an elder at Lealui Royal village, a clever child is one who knows and understands how things are supposed to be and are expected to operate. A clever child will grasp things before they are fully explained. Similar to '*bunangu*' or the capacity to grasp things swiftly, an intelligent child is one who, upon grasping the concept or idea is immediately able to make sense of the rest of what is being said or needs to be done. A clever child does not require fuller and/or detailed explanation of when or how things should be. Hence, cleverness is perceived to be an attribute of intelligence.

However, to be clever has both negative and positive connotations. To be clever in a negative sense could mean being a crook that would illegally get things and not be punished for the wrong done. The positive sense of cleverness is ability to grasp things immediately or in their initial formulation, requiring less information on them.

### **Conclusion on Lozi concept of Intelligence**

The Lozi concepts of intelligence which I have interpreted and discussed from my research findings embody broad and deeper dimensions of intelligence which are influenced by life and human living. As described in my discussion, these concepts primarily recognize two principal sources, *Ngana tanu* and *Ngana takuwanina*, where *Ngana tanu* is the bedrock upon which *Ngana takuwanina* is realized. Similarly *Ngana takuwanina* takes the various forms of intelligence as social family responsibility, economic independence and academic cognitive power. While *Ngana takuwanina* is acquired through various ways, it can generally be influenced by biological factors, environmental factors and social-class and ethnic differences in IQ. As a

society that fosters the common good of society and collective existence, intelligence is generally viewed, not only in the child's ability to stand up on his/her own but as well as in acts and in a life that promotes peace, unity and harmony in society. While individual excellence is recognized, collective progression of society is much more emphasized to the extent that intelligence and intelligent acts are consequently viewed through their intent to promote not only individual good but the good of others in society.

By way of getting a validation of this research findings which the researcher has presented above, after presenting them at a week-long research presentations seminar which was organized and hosted by University of Zambia Postgraduate Studies, the researcher received very positive affirmation from a group of 8 Lozi men and women who attended my presentation.

## **5.2. Examinations Council of Zambia (ECZ) Special Paper One & Two**

As earlier indicated, the Examinations Council of Zambia (ECZ) designs and administers Special Paper One & Two (SSP I & II) examination papers among other examination papers to Grade Seven candidates. SSP I & II are used as aptitude tests which measure the candidate's ability to undertake higher form of learning by assessing the candidate's cognitive ability or intelligence. The two exams which have been used as tools for selection purposes to higher schooling were developed from ideas of the study by Raven.

### **Raven's Progressive Matrices**

The Raven's Progressive Matrices are an assessment of abstract reasoning, originally developed by Dr. John C. Raven in 1936. In each test item, the candidate is asked to identify the missing

item that completes a pattern. Many patterns are presented in the form of a 4x4, 3x3, or 2x2 matrix.

### **Versions of the *Progressive Matrices* Tests**

There are three basic versions of the *Raven Progressive Matrices* Tests: The Standard Progressive Matrices, the Colored Progressive Matrices, and the Advanced Progressive Matrices (Raven, 2008).

The Standard Progressive Matrices is the most basic test. It is designed to cover all levels of ability from early childhood through adulthood to old age. It consists of 60 problems presented in five sets of 12. Within each Set the items become more difficult but they then revert to being easy again at the beginning of the next Set.

The Coloured Progressive Matrices were developed to spread the scores of the less able children. They consisted of the first two sets of the Standard Progressive matrices but with a third set of easy items (Raven, 2008). They are known as coloured simply because the items in the first two sets are presented in colour.

The Advanced Matrices were developed in order to spread the scores of the more able children. This one consists of two sets: one for a practice set of 12 items (take home) and the main test which consists of 36 items.

According to their author, Raven's Progressive Matrices and Vocabulary tests measure two main components of general intelligence (originally identified by Charles Spearman): the ability to think clearly and make sense of complexity, which is known as educative ability (from the Latin root 'educere', meaning 'to draw out'), and the ability to store and reproduce information, known as reproductive ability (Raven, 2008). Hence, Raven conceptualized intelligence as the ability to think clearly and make sense of complexity and to store and reproduce information. Through his tests, Raven sought to measure the child's capacity to think clearly, capacity to grasp and comprehend concepts as well as the capacity to return (remember) what has been comprehended. The ideas from the Raven Progressive Matrices have been adopted and used by the Examinations Council of Zambia through Special Paper One & Two. The two papers are intended to measure several aspects, characteristics or qualities of intelligence. The current Special Paper One focuses on mental cognitive processes of comprehension, analysis, synthesis, application, knowledge and evaluative abilities. On the other hand, Special Paper Two uses nonverbal perceivable images which cause a candidate to apply their cognitive abilities to arrive at the answer being demanded. In Special Paper Two, similar questions such as 'odd one out' are found. Other questions pertain to the child's ability to observe an additional change, subtraction, folding and unfolding, rotation, reflecting, arbitrary change as well as the Latin Square.

Since their validation in 1973, Special Paper One & Two examinations papers are administered especially to Grade Seven pupils for selection process for those who would be assessed as capable of handling higher form of studies into Secondary school. According to ECZ, Special Paper One & Two exams can be undertaken by any child as long as the child has been exposed to formal schooling. By formal schooling is implied having attended Primary School from Grade

One to Grade Seven. However, what is unfortunate is that the results of this examination grade the intelligence of a child and place the child into a category which may have been arrived at simply by relying on this single medium measure of child intelligence. Unfortunately, this has a ripple effect across society when results of this measure of intelligence are applied in the villages where the concept of intelligence and its measure are not the same.

Similarly, according to Hughes' concept of backwash effect, teachers begin to teach contents of the examination papers for passing rather than for learning purpose (Hughes, 2003). In this way, the purpose of learning becomes that of passing examinations only.

### **5.3. Intelligence assessed by Special Paper One & Two vs the Lozi concept of Intelligence**

According to Table 4.5 on page 70, a certain number of questions are asked in various categories, categories which are meant to capture aspects of measurable intelligence. These categories are as follows: ability to arrange letters or words in alphabetical order; ability to analyze and solve problems; the child's level of knowledge (mostly contents of formal schooling); the child's ability to analyze numbers and letters; the child's knowledge of words and their opposites; and the child's ability to distinguish the odd one out.

In order to compare and contrast these measures of intelligence/aptitude to the Lozi concepts of intelligence and its measure, let me expand and explain what is measured by Special Paper One & Two using Special One & Two examination papers used by ECZ in 2011.

Table 5.3 on the following page shows characteristics of intelligence that are assessed by Special Papers one and two.

What Special Papers One and Two measure:
Ø Special Paper One & Two measures ability to arrange letters or words in alphabetical order as a measure of intelligence.
Ø Special Paper One & Two measure ability to analyze and solve problems.
Ø Special Paper One & Two measure the child's level of knowledge (mostly contents of formal schooling).
Ø Special Paper One & Two measure ability to analyze numbers and letters.
Ø Special Paper One & Two measure knowledge of words and their opposites.
Ø Special Paper One & Two measure ability to distinguish the odd one out.

Table 5.3.

### **5.3.1. Special Paper One & Two measures ability to arrange letters or words in alphabetical order as a measure of intelligence**

This measure of intelligence (aptitude) tests on how well the child understands and remembers the alphabet. Secondly it tests the child's ability to arrange words according to the learned alphabetical order. What is critical here is to remember the alphabet and apply the concept or its

order to the given words. This, therefore, tests memory and applies of what the child remembers to a given problem.

While a test of memory and ability to apply what a child has acquired through formal or informal learning is also found in the traditional measure or concept of intelligence, application in the traditional Lozi concept of intelligence refers to more practical problems of everyday life than to inanimate letters of the alphabet. While the concept behind this measure is what is significant, more practical life matters could perhaps be more appealing and provoking to a child who grows up in a Lozi culture.

### **5.3.2. Special Paper One & Two measure ability to analyze and solve problems**

Questions under this category measure the child's ability to solve problems based on the expected (acquired/ learned) normative way of being in a given society. One Special Paper One example question is:

*Mr. Phiri was caught stealing in his neighbor's house. Which is the right place to take him? The answer options are: A. College; B. Hospital; C. Police; and D. Clinic.*

The proposition above identifies a problem situation which a child must equally perceive as such. In other words, the proposed problem should cut across society and cultures as objective. From the suggested answers, it is clear that formal schooling will expose the child to police as a place where crime is dealt with. While this may equally be true for the traditional set up, it could also be likely that such a crime would traditionally require to be brought before a council of elders such as the Barotse Royal Court, an option which would not seem to relate to this measure

of intelligence. More than merely being a cognitive problem, concern would equally be to explore common notions or concepts of issues that cut across cultures and societies if the school measure of intelligence is to be an objective measure of intelligence that would be acceptable in all standards.

### **5.3.3. Special Paper One & Two measure the child's level of knowledge (mostly contents of formal schooling)**

In the Lozi concept of *Ngana tanu* and *Ngana takuwanina*, the Lozi people highlight the fact that of the two sources of intelligence, *Ngana takuwanina* entails that intelligence is acquired. My research shows two major sources of acquired intelligence in *Ngana takuwanina*. These are Village (Kwa Hae) and Formal School (Kwa Sikolo). This, therefore, implies that there is intelligence that a child acquires from the village. At the same time, there is also intelligence that is solely acquired from formal schooling. In Special Paper One & Two measure of intelligence, generally what is measured is that knowledge or intelligence which is acquired from formal schooling. For example, according to 2011 Special Paper One & Two exam papers, questions that test the child's knowledge included words such as:

(i) **always has**; (ii) **word opposite**; and (iii) **odd one out**.

Two examples of 'always has' questions which would appeal to a variety of cultures were as follows:

*School always has.....a) Boards; b) Flags; c) Prefects; d) Pupils.*

To this question the correct answer is d) Pupils. The question seeks characteristics which are implicitly of a school. In other words, there are some rural schools which would not have boards, a flag or prefects. But for any school to be, it requires pupils.

*Cattle always have.....a) Hooves; b) Horns; c) Milk; d) Tick*

In this question, a) Hooves, is the answer as there are some cows without horns or have had their horns removed, some cows are male and therefore cannot produce milk and treated cows would not always have ticks.

While the concept of school will be familiar to those who have been exposed to and attended formal schooling, a child who grew up in the village rearing cattle will easily relate to the question on cattle as it relates to his/her village setup. In this regard, therefore, an assertion of child intelligence based on such a combination of questions yields an objective sense of child intelligence.

#### **5.3.4. Special Paper One & Two measure ability to analyze numbers and letters**

Questions in this category relate to alphabetical letters and numbers. Sets of letters and numbers are arranged differently but in such a way as to create a pattern which a child must be able to analyze and figure out. The letters are based on the alphabetical letters whereas numbers are learned through school arithmetic. This assessment assesses two things. The immediate assessment is the child's memory capacity. How well the child remembers learned letters and numbers will affect how best they can analyze given problems in order to arrive at a solution.

The second characteristic that is assessed by questions in this category is the cognitive ability of the child. As research showed, the Lozi concept of intelligence is broader than cognitive activities. As a matter of fact, cognitive ability is merely one of the aspects of intelligence as it is conceived by the Lozi people.

### **5.3.5. Special Paper One & Two measure knowledge of words and their opposites**

Knowledge of words and word opposites assesses the child's acquired knowledge of words and their meaning. In general, words that are used in the test are words that the child encountered during the years of schooling up until the test time. This entails that the child needs to possess the knowledge and meaning of the words in order to understand and provide solutions to presented examination problems. As the test is set and administered in English, it equally entails that the child must understand the meaning of the given words in English. As is the case in most Zambian cultures, English is only the second language, after the native language. In the 2011 the following questions, for example, were in the Special Paper One examination paper:

1. PROMOTE is to DEMOTE as REJECT is to....
  - a) ACCEPT; b) CHASE; c) DENY; d) REFUSE
2. MAN is to WOMAN as COCK is to....
  - a) CHICKEN; b) DUCK; c) FEMALE; d) HEN

While these word opposites may appear to be simple words and their meanings commonly found in most if not all cultures, they are concepts written in a foreign language. To arrive at a correct answer, a child must first understand the meaning of the word. To understand the meaning of the

question, a child must first translate the question into her/his native language (if he/she finds an equivalent word) before arriving at an answer. Children who fail to know the meaning of the words, which are written in English, will not succeed in understanding what is necessary to complete the puzzle. Therefore, they will fail the examination and society will deem them not intelligent. In this way, Special Paper One & Two focus their measure on cognitive characteristics of intelligence and ignore the broader scope of intelligence.

### **5.3.6. Special Paper One & Two measure ability to distinguish the odd one out**

Questions in this category explore the child's ability to assess similarities and differences in given words or objects. In the case of words, it is first required that the child already knows and understands the meaning of all the words in order to make an assessment of their similarity or difference. The language the words are expressed in is another factor that could either slow down candidates or hinder them from comprehending the problem and therefore, making correct distinctions.

In a way similar to the measured concepts above, this measure also would neglect the other aspects or characteristics of intelligence which my research among the Lozi people of Western Zambia brought to the fore.

### **5.4. Perception of Grade VII School Teachers about Special paper One & Two**

After establishing the essence and focus of the two examination papers (Special Papers One&Two) from ECZ, I undertook to explore what Grade VII school teachers, who prepare candidates for the examination, know of the characteristics of intelligence Special Papers One &

Two seek to assess in a child who undertakes the examination. For this research, the researcher interviewed four Grade VII school teachers from two different schools in Mongu, i.e., Mongu Basic School and Limulunga Basic School. From my research interview with teachers, it is understood that Special Paper One & Two tests focus on how the child connects ideas, ideas about things related to literacy and mathematics. One teacher at Mongu Basic School indicated that “Special Paper Two normally deals with intelligence in terms of how fast a child is in arranging or rearranging” (Melody Kasoma Kabwebwe). In this regard intelligence was characterized by cognitive swiftness of arranging or rearranging presented information or data. Intelligence was also understood as the child’s ability to add or subtract details.

Special Paper Two specially tests the child’s ability to make visual connections: “There are certain questions in Special Paper Two which look at their sight and how they can connect items. If a child has visual problems, it will be difficult for the child to know what is happening with the question” (Melody Kasoma Kabwebwe). With good visual connection ability, “children are able to see that here the sequence is going this way; here it is this thing which is missing. This way we are able to see if the child’s visual connection is ok, because it affects the child’s intelligence”. In this regard intelligence as assessed by Special Paper Two is ability to make required visual connections. These visual connections are of mere objects that often are of no practical purpose to everyday life of a child in the context in which the child lives.

#### **5.4.1. Special Paper One & Two measure general knowledge**

Teachers at Mongu Basic School observed that Special Paper One & Two measure general knowledge of what children already know either from their homes or from their formal

schooling. They held that general knowledge could be explored by such a Special Paper One question as: *A man is to a woman as a hen is to...*. Such a question is understood to measure the general knowledge of what the child knows both from home and from what they are taught from Grade one. Teachers at Mongu Basic School further used the example of '*Mulabalaba*', a local cultural cognitive developmental game that measures the child's critical thinking and ability to make visual connections. "*Mulabalaba* is about seeing the possible connections and preventing them from happening or making them happen" (Melody Kasoma Kabwebwe). (cf. figure 5.1, figure 5.2 and figure 5.3 on page 72-3).

It is a game that is so ancient that it is a contender for the oldest game in the world. In England it is known as *Nine Mens Morris* or *Morelles* or *Merrills* or *Merels* or *Mill* or just plain *Morris*. Although it is known by different names in different places, *Mulabalaba* traces its origin to many places. A board of this type has been found cut into the temple at Kurna, Egypt (~1440 B.C); and the Chinese also played the game c. 500B.C. The game was widely played in England in A.D. 1300 and visitors to the cathedrals of Norwich, Canterbury, Gloucester, Salisbury and Westminster Abbey can see boards cut into the cloister seats by monks (Masters, 1997). In the *Mulabalaba* game, gaps are created to be filled up by an opponent player who must notice them. Should the opponent fail to see the gaps that need to be filled up, then the player who creates and sees them fills them, completing the line and wins the game. In this regard, regardless of where the child hails from, the Grade Seven Child is expected to have acquired some general knowledge on how things work and how they should be.

However, the teachers interviewed acknowledged that certain images or items do not univocally cut across the national society. As Mrs. Melody Kasoma Kabwebwe observed: "But in the same

questions there are some which are biased and don't favour our children in the remotest villages who have not been exposed to some modern technologies." The justification given is that such biased or discriminative questions are normally no few that they would not significantly influence the results.

While Special Papers One & Two may be seen to measure acquired knowledge from formal schooling, a Grade VII school teacher at Limulunga Basic School argued that since there is no syllabus for Grade VII, children are therefore not expected to come into the examination with some mastered knowledge or to remember anything that was taught in school. Mrs. Kalimukwa further observed that before Grade VII evolved to be what it currently is, examination papers would be burnt or shredded after the exam in order that there is no learning material for Special Paper One & Two examinations. Grade VII Primary School teachers at Limulunga also held that Special Paper One & Two do not test what is taught in school, as there is nothing of its nature to be taught in Grade VII. Instead, Special Papers One & Two test the thinking level of a child. "We test because we want to see how much they know, not what they have learnt", Mrs. Kalimukwa.

#### **5.4.2. Special Paper Two measures the ability to recall, comprehend and apply**

Mrs. Kabubi, another Grade VII School teacher at Limulunga Basic School, highlighted six categories or levels of Special Paper One & Two. Each level focuses on an aspect of the child's intelligence. According to her, level one of Special Paper Two measures knowledge. Questions in this level of Special Paper Two expect a child to apply only one skill, that of recalling. Level two of Special Paper Two tests the child's comprehension. Here a child is expected to recall and understand. Level three of Special Paper Two requires the child to apply. After recalling and

comprehending, the child is then expected to apply what he/she has recalled and understood. These three skills of recalling, comprehension and application are tested by Special Paper Two. Mrs. Kabubi further illustrated that sometimes a child is presented with a situation. Through a situation, three characteristics or aspects of a child's intelligence are tested: whether the child is able to recall any item in the presented problem that could serve as a clue to the solution; whether the child understands the problem itself; and finally, how the child can apply the recalled clues to solve a presented problem. The child's ability to combine these to arrive at a desired solution is a measure of a child's intelligence.

Teachers at Limulungu further recognized two other levels: Analysis and Synthesis. Through the analysis level, a child is expected to analyze a situation or a given problem. Through the level of synthesis, a child is able to break down ideas to come up with one greater idea which is the solution to the problem situation.

According to Mrs. Kalimukwa and Mrs. Kabubi, these levels or skills measure the intelligence of a child. They both observed that Special Papers One & Two principally measure the intelligence of a child and less of the child's knowledge. They measure the child's ability to solve problem situations.

The two teachers further argued that imaginary situations which are presented in the two examination papers (Special Paper One & Two) are somehow related to the child's real life experiences. They observed that often the questions of sequencing relate to a home life

environment where even at home, children know the order of sizes of things. Children know that that size order for instance follows from smallest to biggest or from the biggest to the smallest.

However, Mrs. Kalimukwa and Mrs. Kabubi still observed that results of Special Paper One & Two do get affected by environmental differences where a child is raised. They cited an example of a child growing up in the city where he/she has greater chances of learning English than a child growing up in Lealui. When the two come to face the same questions especially in Special Paper One, questions that are related to English as a language, a child growing up in the city is more advantaged than the child growing up in Lealui in their knowledge of the English language. Similarly, technology is another factor of imbalance between the city child and the village child. A child growing up in the city is exposed to a computer whereas not even a teacher in Lealui would be exposed to one. Such and other exposures place candidates of Special Paper One & Two examinations at different starting off points in the face of a uniform exam that takes less consideration of what different children have been exposed to.

### **5.5. Lozi concept of Intelligence compared to what is measured by Special PaperOne&Two**

The measure of intelligence evolved with time. Such measures as Mazes, Healy Puzzle Box, Stanford-Binet Intelligence Scale, Wechsler Scale, etc, have been employed to measure intelligence. In the Zambia Primary School curriculum, intelligence is measured especially by Special Paper One & Two examinations which in turn are used for selection purposes for candidates into Grade VIII Secondary School education. However, my research among the Lozi

people of Western Zambia has revealed that intelligence is broader than what is measured by the school Special Paper One & Two.

The Lozis' concept of intelligence can be categorized mainly into four main categories. These are: Social-family Responsibility, Economic independence and Academic cognitive ability.

Special Paper One & Two, however, measures characteristics of intelligence that principally belong to a single category of the Lozi concept of intelligence namely cognitive processing ability.

In the measure used in the following categories namely, ability to arrange letters or words in alphabetical order; ability to analyze and solve problems; the child's level of knowledge (mostly contents of formal schooling); the child's ability to analyze numbers and letters; the child's knowledge of words and their opposites; and the child's ability to distinguish the odd one out, Special Papers One & Two restrict the scope of intelligence measured to that of cognitive abilities and neglect the other two significant realms of intelligence as highlighted in my research. As earlier observed the other two realms of intelligence highlighted by the Lozi people are equally significant in order to assess and determine the correct and true intelligence of a child. Social-family responsibility recognizes that human beings don't exist in a vacuum but in relation to other human beings. This implies that the Lozi people emphasize this realm of intelligence and foster it in the child as he/she grows up. As an embraced value, attributes of intelligence in this realm equally need to be tested if a concept of intelligence that relates to the local culture is to be realized. Similarly, in restricting its measure of intelligence to cognitive ability, Special Papers One & Two ignore the realm of economic independence which is highly

upheld by the local culture as found among the Lozi people of Zambia. Economic independence recognizes that as a person grows up, he/she needs to realize and embrace values that will enable him/her to stand on his/her own. Ability to grow crops, to catch fish, to hunt and to possess hunting skills, to draw water, to cook and to keep the home environment neat are all characteristics of intelligence which the Lozi people encourage in children before they attempt formal schooling. To neglect these characteristics of intelligence in the test papers is to neglect a significant aspect of local intelligence, thereby restricting or confining the concept of intelligence only to the cognitive ability.

The visual imagery especially used by Special PaperTwo test paper tends to have little or no practical significance in the day to day life especially in the Lozi culture. The visible images that Special PaperTwo uses as problems that should be resolved are purely abstract images that have no immediate practical usability in the Lozi culture. Special PaperTwo comprises square images, circles, triangles, rectangles and several other indescribable images that have no existence in real life. While the objective of Special PaperTwo is to assess the abstract thinking capacity of a child, for a more practically attractive and meaningful examination, paper images should include pictures and images that children grow up seeing and experiencing. In this way, children would easily relate to the material as it is of practical and tangible lived reality. A test paper of this nature will attempt to include the broad nature of intelligence as upheld by the Lozi people and most Zambian cultures.

Contrasts highlighted above are significant aspects of intelligence that help to bring out concepts of intelligence among the Lozi people and its measure, concepts of intelligence measured by

Special Paper One & Two and how incorporation of explored broader aspects of intelligence will ensure that examinations and test papers draw closer and closer to measuring the real nature of intelligence.

## **CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS**

In his theory of Multiple Intelligence, Howard Gardner proposes that human beings display at least nine kinds of intelligence, each linked to a particular area of the brain and several of which are not measured by IQ tests. I further posit that not all of Gardner's nine kinds of intelligence are measured through Special Paper One & Two. Gardner's nine kinds of intelligence are particularly attuned to particular stimuli or sensations. For instance, linguistic intelligence is particularly attuned to or sensitive to the meaning and sounds of words, to the structure of language and to many ways in which language can be used whereas spatial intelligence is particularly attuned to perceive visual-spatial relationships and the ability to transform these aspects of one's visual experience in the absence of the stimuli. Due to such particular sensitivities as these, given the appropriate stimulation, a person becomes an engineer, sculptor or cartographer, for instance.

These theories aim to widen our concept of intelligence. When we subscribe to such a theory as the theory of 'Multiple Intelligence', we therefore must recognize the fact that the measure of such multiple kinds and concepts of intelligence should be varied.

Every local culture and peoples' concepts of intelligence are influenced and strongly dependent on cultural activities that shape its people as well as cultural values that are fostered for harmony,

peaceful co-existence and the progression of peoples. However, I share Serpell's thought that Western education systems and Western concepts of intelligence which were imposed on local cultures, took root in most African societies and have been used widely as lens through which the intelligence of an African child is measured (Serpell, 1993). IQ tests (Intelligence Quotient), for instance, "tend to measure adaptive behaviour within a particular cultural context, hence they are (somewhat inevitably) culturally biased in that it is difficult to measure adaptive and effective behaviour without embedding it in a cultural setting" (Cardwell 1996, p. 131). On the contrary, Western concepts of intelligence and its measure, in their quest for uniformity, strip the local concept of intelligence of its richness and depth. The richness and depth of the local concepts of intelligence are influenced by regional environment, geographical, traditional and cultural activities and values that shape society and its people. For example, survival skills are different in the snow region from those of a tropical region and from an earthquake prone region to a non-earthquake prone region. Due to struggling levels of development in most of Africa, children learn survival skills at a much younger age than those of Western worlds. In this regard therefore, the measure of intelligence must take into fuller account, geographical, environmental, social and economic factors that affect peoples and cultures in order to come up with intelligence measuring tools that will measure comprehensive intelligence. Unfortunately, as Serpell noted, for the most part, the intelligence of an African child has, with the emergence of Western civilization, been measured through Western lenses which is due to the "historical fact that the seeds of the present were more or less consciously exported to Zambia, as well as to many other parts of the world, by British educators during the first half of the twentieth century" (Serpell 1993, p.76), whose goals were either to emancipate or oppress to be humanitarian or exploit. As such if any society wished to benefit from Western technological interventions, they had to

import Western institutions and their embedded practices (Serpell 1993, p.106). Unfortunately, the education package exported by the Western world to the Third world labelled for “enlightenment, liberation and enrichment” (Serpell 1993, p.106) more often served the opposite, i.e., “...mystification, oppression and impoverishment”, (Serpell 1993, p.106) as civilization was equated to urban life-style, education to schooling, and intelligence to aptitude for school subjects.

After a journey into the African region of western Zambia, exploring the Lozi peoples’ concept of intelligence and how it is assessed, I have proposed the following recommendations for consideration by those who formulate and administer intelligence assessment tests, as intelligence correctly assessed will paint a truer picture of an African child, unite cultures, enhance lives and bring about economic and social progress of peoples as individual capabilities will be properly recognized.

There are various means to measure and arrive at common concepts of intelligence. For instance, psychometric theorists of the multicomponent view hold that intelligence tests should require people to perform a variety of tasks such as defining words or concepts, extracting meaning from written passages and solving mathematical puzzles (Bower, 2003). Sternberg’s triarchic theory suggests that if we want to establish the true intelligence of a child, we need to consider three factors: 1) the context in which they are performing (that is the culture and historical period in which they live and their age: 2) their experience with the tasks and whether their behaviour qualifies as responses to novelty or automated processes, and: 3) the information processing skills that reflect how each person is approaching these tasks (Burns & Nettelbeck, 2003; Sternberg, 2003; Tigner & Tigner, 2000).

## **RECOMMENDATIONS**

After research among the Lozi people of Western Zambia, commonly known as Barotseland, exploring the Lozi concept of intelligence and how it is currently assessed by Lozi people and what is measured by Special Paper One & Two Grade VII examinations, the researcher hereby make the following recommendations based on the local (Lozi) concept of intelligence:

### **1. Measure the broader perspective of intelligence rather than just cognitive ability**

This research among the Lozi people has shown that intelligence is perceived not merely as cognitive ability of counting, adding or subtracting, completing patterns, distinguishing differences in a created patterns and ability to arrange letters but encompasses a broader perspective that pertains to peoples' way of life. As other researchers in Africa have noted, in most African tribes and societies, intelligence entails depth and breadth vs speed of processing. Durojaye in his research among the tribes of Nigeria found out that Nigerian tribes, e.g., Yoruba tribe, emphasize the importance of depth of listening rather than just referring to intelligence and being able to see all aspects of an issue in its proper overall context (Durojaiye, 1993). This notion holds that speed undermines the quality of work because less time is given to fully grasp what one wishes to achieve or learn.

As earlier noted in this paper, Ruzgis and Grigorenko (1994) highlighted the fact that in Africa concepts of intelligence evolve largely around skills that help to facilitate and maintain harmonious and stable intergroup relations, as these are important African values since communal living and sharing is cardinal to an African way of life. Hence, social responsibility, *ku*

*tumikira* (in the Chewa language of eastern Zambia); *khulupilika/-mvana* (trustworthiness, cooperativeness), and cooperativeness and obedience are significant attributes of intelligence (Serpell, 1974, 1977, 1982 and 2000). In Kenya, parents emphasize reasonable participation in family and social life as important aspects of intelligence (Super, 1983) whereas among the *Kokwet* of western Kenya the word *ngom* was applied to child intelligence and seemed to denote responsibility, highly verbal cognitive quickness, the ability to comprehend complex matters quickly, and good management of interpersonal relations (Sternberg, 2000).

Special Papers One & Two focus their measure of intelligence on the cognitive abilities. Cognitive ability, however, is merely one factor of the broad concept of intelligence as it is perceived in most African cultural societies. In order to arrive at a better judgment of the intelligence of an African child, examination test papers should therefore seek to recognize and embody especially the social dimension and cultural economic activities that are oriented towards individual economic independence.

## **2. Periodical review of established means of testing**

After pretest analysis of Special Papers One & Two and after validating them as a more useful predictor for success in technical courses than Grade VII English, Mathematics or verbal reasoning, ECZ adopted the two papers and have since been using them as selection tools for Grade VIII candidates. However, as ECZ acknowledged concerns over whether the concepts of intelligence which Special Paper One & Two helps them to establish is also reflective of traditional cultural concepts of intelligence, it is recommended to conduct periodical reviews of the current measuring tools for Grade VIII school selection mode of using Special Paper One &

Two. Furthermore, ECZ itself raised a concern as to whether the established means of measuring the child's intelligence correspond to the current lifestyle and values of society. This view is similarly shared by Heron who conducted research on Zambian locally developed psychometric measures of reasoning ability and an objectively-marked national Secondary School Selection examination. Through his research Heron realized that very little connection was found between the status of the subjects on Piagetian tasks and their performance on the ECZ Special Papers. These results suggest a possible rapprochement between psychometric and established national Secondary School examinations (Heron, 1971).

### **3. Nature of Contextual or Problem Situations to be resolved**

From the contextual perspective of intelligence, Sternberg understood that intelligence behaviour may vary from one culture or subculture to another, from one historical time to another, and from one period of the lifespan to another. Intelligence measures should therefore be familiar and applicable in the context or culture of the people being tested. Because tests tend to measure adaptive behaviour within a particular cultural context, they are inevitably culturally biased in that it is difficult to measure adaptive and effective behaviour without embedding it in a cultural setting (Cardwell, 1996). This recommendation acknowledges that people will perform more or less intelligently on a familiar task. If, however, items on an intelligence test are familiar to members of one cultural group but not familiar to another, the second group will perform much worse than the first group, reflecting what Sternberg calls a cultural bias in the testing procedure. In this regard, the measure would not reflect the correct intelligence of the candidates across the country. Test problems used in test papers should be of problems that are familiar to all local cultures and should have the same or similar kind of solutions in all cultures. Similarly,

the test problems should be relevant and practically applicable to all local the cultures. In order for the test materials to achieve this, we must first seek to comprehend geographic and traditional cultural distinctions of the various major groups/tribes of the local people in the country. Variation in culture and traditions impacts a way of life and values. These regional or geographical variations range from rice farming and fishing culture to non-farming pre-school culture that exposes children to schooling long before those of other cultures get exposed to it. Similarly, problem solutions being sought for in the test papers should be practically relevant to all societies where the test is applied.

#### **4. Language and names of people, places and things**

What is familiar often triggers easier and quicker recognition than what is alien and unfamiliar. While nowadays traditional government schools insist on using the regional first language of the people for instruction in the initial grades, pre-schooling cultures expose younger children to the second language (in our case English) at an early age. This introduces them to think in English first and only later in a local language or their first language. On the other hand, rural children and children of urban poor townships/compounds who are instructed in the vernacular language, begin processing using their first language before interpreting the problem situation into English (their second language). The process of thinking in one language before interpreting the thought into the second language slows down cognitive processing speed, resulting in delays or incomplete examinations, resulting in a child failing an exam.

At the same time, familiar names of people, things and places should be used to provoke immediate recognition and hence, speed up cognitive processes. An example of names was cited

in Lealui relating to the initial reading materials in the Lower Grades of our Primary education. Why do our Lozi children have to read about Jelita and Mulenga? Who is Jelita and who is Mulenga? In other words, these names are not immediately part of the local cultural context, and are hence difficult to immediately relate to. Instead, local cultural names are proposed as they immediately trigger familiarity and the child is immediately able to associate with a local name. Similarly, what is familiar also appeals. Beginning with a familiar name of a person such as Monde or Nyambe or of a place in the region or country, the speed at which the child associates with the familiar is faster. Consequently learning and cognitive processes are improved.

### **5. Attainment vs Aptitude tests**

All Grade VII examinations are conducted at once towards the end of the year. Pupils begin their Grade VII at the beginning of January and are prepared to write their examinations sometime late in October. When examination time comes, there are various cultural activities that would be beginning to take place. For most parts of the country, farming processes will be beginning at this particular time of the year. Besides what would be happening environmentally and to the local culture and society, pupils must be in good health, not have bereavement in the family or any misfortune to come their way. In addition, there is a massive buildup of anxiety when the opportune time comes only once a year. In the event that something serious happens either to the pupil, the family of the pupil or the environment where the child lives such as a flood that washes away the only bridge that links the village to the school (as November marks the onset of tropical rains in most part of our country), this would imply that the child does not write the examination and hence has no way of passing. Generally, events are to be of greater magnitude to influence postponement of such activities as Grade VII exams. Other misfortunes are health

related. In malaria prone Sub-Sahara Africa, a percentage of children are unable to write their passing examinations due to Malaria attacks which can last up to four days to a week. Owing to such circumstances, the school curriculum should consider using an attainment process of selecting candidates to Grade VIII rather than the one time aptitude tests. The attainment process or point accumulationsystem would provide for a wider span to explore the child's level of intelligence compared to a one-time event of a single examination.

## **REFERENCES:**

- Azuma, H., & Kashiwagi, K. (1987). Descriptions for an intelligent person: A Japanese study. *Japanese Psychological Research*, 29, 17-26.
- Berry, J. W. (1984). Towards a universal psychology of cognitive competence. In P. S. Fry (Ed), *Changing conceptions of intelligence and intellectual functioning* (pp. 35-61). Amsterdam: North Holland.
- Blacking, J. (1982). Songs and Dances of the Venda people. In David Tunley (ed.) *Music and Dance*, fourth National Symposium of the Musicological Society of Australia, Perth: University of Western Australia, Department of Music, pp. 90-15.
- Boring, E.G. (1923, June 6). Intelligence as the tests test it. *New Republic*, 35, 35-37.
- Bower, B. (2003). Essence of G. *Science News*, 163, 92-93.
- Burns, N. R., & Nettelbeck, T. (2003). Inspection time in the structure of cognitive abilities: Where does IT fit? *Intelligence*, 31, 237-255.
- Cardwell, M. (1996). *Schaum's A-Z Psychology*. New York: McGraw-Hill.
- Chaplin, J.P. (1985). *Dictionary of Psychology: Second Revised Edition*. New York: Dell Publishing.
- Chen, M.J. (1994). Chinese and Australian concepts of intelligence. *Psychology and Developing societies*, 6, 101-117.

- Chen, M. J., Braithwaite, V., & Huang, J. T. (1982). Attributes of intelligent behavior: Perceived relevance and difficulty by Australian and Chinese students. *Journal of Cross-Cultural Psychology*, 13, 139-156.
- Chen, M. J., & Chen, H. C. (1988). Concepts of intelligence: A comparison of Chinese graduates from Chinese and English schools in Hong Kong. *International Journal of Psychology*, 223, 471-487.
- Colvin, S. (1921). What I conceive intelligence to be. *Journal of Educational Psychology*, 12, 136-139.
- Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior*, 11, 671-684.
- Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches: Second Edition*. California: Sage Publishing, Inc.
- Das, J. P. (1994). Eastern views of intelligence. In Sternberg, R. J. (Ed.), *Encyclopedia of human intelligence* (Vol. 1, pp. 387-391). New York: Macmillan.
- Dasen, P. (1984). The cross-cultural study of intelligence: Piaget and the Baole. *International Journal of Psychology*, 19, 407-434.
- Dearborn, W. F. (1921). Intelligence and its measurement: A symposium. *Journal of Educational Psychology*, 12, 210-212.
- Durojaiye, M. O. A. (1993). Indigenous psychology in Africa. In U. Kim & J. W. Berry (Eds.), *Indigenous psychologies: Research and experience in cultural context*. Newbury Park, CA: Sage.
- Examinations Council of Zambia (2011). *Special Paper I*. Lusaka (Zambia): Examinations Council of Zambia.

- Examinations Council of Zambia (2011). *Special Paper II*. Lusaka (Zambia): Examinations Council of Zambia.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books
- Gardner, H. (1999). Are there additional intelligences? The case of naturalist, spiritual, and existential intelligences. In J. Kane (Ed.), *Education, information, and transformation*. Englewood Cliffs, NJ: Prentice-Hall.
- Gill, R., & Keats, d. M. (1980). Elements of intellectual competence: Judgment by Australia and Malay university students. *Journal of Cross-Cultural Psychology*, 11, 233-234
- Henmon, V.A.C., & Nelson, M.J. (1932-1935). *Henmon- Nelson test of mental ability*. Boston: Houghton Mifflin.
- Hughes, A. (2003). *Testing for Language Teachers: Second Edition*. Cambridge, UK: Cambridge University Press.
- Jahoda, G. (1982). *Psychology and Anthropology: A Psychological Perspective*. London: Academic Press.
- Jenkins, R. (1998). *Questions of Competence: Cultural, Classifications and Intellectual Disability*. Cambridge: Cambridge University Press.
- Kathuria, R., & Serpell, R. (1996, April). *Standardization of Panga Muntu test: A non-verbal cognitive test developed in Zambia*. Paper for International Society for the study of Behavioral Development (ISSBD) African Regional Workshop, Lusaka, Zambia.
- Laura E. Berk. (2003). *Child Development- Six Edition*. USA: Illinois State University.

- Masters, J. (1997). <http://www.tradgames.org.uk/games/Nine-Mens-Morris.htm>. Accessed on May 31<sup>st</sup>, 2013.
- Mc Mahon, J. W., Mc Mahon, F. B. & Romano, T. (1985). *Psychology and You: Second Edition*. USA: West Publishing Company.
- Ministry of Education (1973). *Psychological Services: Annual Report*. Lusaka.
- Munn L. Norman. (1962). *Introduction to Psychology*. Boston: Houghton Mifflin Company.
- Newman, H. H., Freeman, F. N., & Holzinger, K. J. (1937). *Twins a study of heredity and environment*. Chicago: University of Chicago Press.
- Peterson, J. (1926). *Early conceptions and tests of intelligence*. New York: World Book Company.
- Piaget, J. (1950). *The psychology of intelligence*. San Diego, CA: Harcourt Brace Jovanovich.
- Raven, J. (2008). General introduction and overview: The Raven *Progressive Matrices* Tests: Their theoretical basis and measurement model. In J. Raven & J. Raven (Eds.). *Uses and Abuses of Intelligence: Studies Advancing Spearman and Raven's Quest for Non-Arbitrary Metrics* (Chapter 1, pp. 17 – 68). Unionville, New York: Royal Fireworks Press.
- Rogoff, B. (2003). *The cultural nature of human development*. New York, USA: Oxford University Press.
- Ruzgis, P. M., & Gregorenko, E. L. (1994). Cultural meaning systems, intelligence and personality. In R. J. Sternberg and P. Ruzgis (Eds.), *Personality and intelligence* (pp. 248- 270). New York: Cambridge.
- Schunk, D. H. (2009). *Learning Theories, An Educational Perspective: Fifth Edition*. USA: Pearson Education, Inc.

- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Copper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177.
- Serpell, R. (1974). Aspects of intelligence in a developing country. *African Social Research*, No. 17, 576-596.
- Serpell, R. (1977). Strategies for investigating intelligence in its cultural context. *Quarterly Newsletter of the Institute for Comparative Human Development*, 11-15.
- Serpell, R. (1977). *The significance of schooling: Life journeys in an African Society*. Great Britain: Cambridge University Press.
- Serpell, R. (1982). Measures of perception, skills and intelligence. In W. W. Hartup (Ed.), *Review of child development research* (Vol. 6, pp. 392-440). Chicago: University of Chicago Press.
- Serpell, R. (2000). Intelligence and culture. In R. J. Sternberg (Ed), *The Handbook of Intelligence* (pp.549-577). Cambridge, UK & New York, USA: Cambridge University Press.
- Serpell, R. (2008). Participatory appropriation and the cultivation of nurturance: A case study of African primary health curriculum development. In Dasen, P. R. (Ed), (2008). *Educational Theories and Practices from the Majority World*. New Delhi- India: Sage.
- Shaffer, D. R. & Kipp C. (2007). *Developmental Psychology, Childhood & Adolescence: Seventh Edition*. Canada: Thomson Wadsworth.
- Siegler, R. S. (1998). *Children's Thinking: Third Edition*. New Jersey (USA): Prentice Hall.
- Sinha, D. (1986). *Psychology in a Third World Country: The Indian Experience*. India: Sage Publications.

- Sternberg, R. J., Conway, B. E., Ketron, J. L., & Bernstein, M. (1981). Peoples' conceptions of intelligence. *Journal of Personality and Social Psychology*, (pp. 41, 37-55).
- Sternberg, R. J., Ferrari, M., Clinkenbeard, P., & Grigorenko, e. L. (1996). Identification, instruction, and assessment of gifted children: A construct validation of a triarchic model. *Gifted Child Quarterly*, 40, 129-137.
- Sternberg, R. J. (1997). The concept of intelligence and its role in lifelong learning and success. *American Psychologist*, 52, 1030-1037
- Sternberg, R. J. (ed.), 2000. *Hand book of intelligence*. New York: Cambridge University Press.
- Super, C. M., & Harkness, S. (1986). The developmental niche: A c conceptualization at the interface of child and culture. *International Journal of Behavioral Development*, 9, 545-569.
- Terman, L. M. (1916). *The measurement of intelligence*. Boston: Houghton Mifflin.
- Thorndike, E. L. (1921) Intelligence and its measurement. A symposium. *Journal of Educational Psychology*, 12, 123-147, 195-216, 271-275.
- Thurstone, L. L. (1938). *Primary mental abilities*. Chicago: University of Chicago Press.
- Vernon, P. E. (1969). *Intelligence and Cultural Environment*. Great Britain: Butler & Tanner Ltd.
- Wober, M. (1974). Towards an understanding of the Kiganda concept of intelligence. In J. W. Berry & P. R. Dasen (Eds.), *Culture and Cognition: Readings in cross-cultural psychology* (pp. 261-280). London: Methuen.
- Woodrow, H. A. (1921). Intelligence and its measurement: A symposium. *Journal of Educational Psychology*, 12, 207-210.
- Yang, S., & Sternberg, R. J. (1997b). Taiwanese Chinese people's conceptions of intelligence. *Intelligence*, 25, 21-36).

[Source: Coyright © 2001. <http://www.raventest.net>: Accessed: 31<sup>st</sup> May, 2013]

## **APPENDIX.1: SURVEYQUESTIONS**

1. *Kakuya ka munahano wa hao, mutu ya nani ngana ki mutu ya cwani?* (According to you, what is an ideally intelligent person/child?)
2. *Kusina ku bulela mabizo, ki bo mani batu baba lala bone uka beya mwa sikwata sababa nani ngana?* (Without naming them, who are the three people you would put in this category of the intelligent ones?)
3. *Ki bana kapa ki ba Sali* (Are they men or women?)
4. *Ka kuama ni ka za tuto ya bona, uziba likamani kwaneku le?* (What do you know of their formal education background?)
5. *Kana ba kena keleke?* (Do they go to Church?)