EARLY CHILDHOOD DEVELOPMENT TEACHERS` UNDERSTANDINGS OF INDIGENOUS KNOWLEDGE AND HOW THEY INCORPORATE IT IN THEIR PEDAGOGICAL PRACTICES.

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A thesis submitted to the Faculty of Humanities, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements of the degree of Doctor of Philosophy.

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Declaration

I **Manzunzu Nomatter**, Student Number 909095, declare that this thesis entitled **Early Childhood Development Teachers` understandings of Indigenous knowledge and how they incorporate it into their pedagogical practices** is my own, unaided work. It is being submitted for the award of the Degree of Doctor of Philosophy in the University of The Witwatersrand, Johannesburg. It has not been submitted before for any degree in any other university.

Signature……………………………… Date…………………………

Abstract

The study establishes Early Childhood Development (ECD) teachers` understandings of indigenous knowledge and how they incorporated indigenous knowledge (IK) into their pedagogical practices. The study was motivated by the growing call for the inclusion of indigenous knowledge into the education system in Zimbabwe. A qualitative research paradigm was adopted because this enabled me to obtain in-depth information from the teachers in their natural setting. A case study method was followed drawing on three schools which were purposively sampled to provide rich, in-depth data. The schools were drawn as one from the urban, peri-urban area and rural areas respectively. Semi- structured interviews; survey, observation and document analysis were used to collect data. The study comprised six (6) Early Childhood Development teachers and three (3) School Heads. Data were analysed in using thematic content analysis. The findings reveal that the Indigenous and western ECD programmes are running parallel to each other. Findings further reveal that tension exists between the more formal approach to ECD offered by schools and the play-based pedagogical approach which are widely advocated by those researching in the ECD space. It emerged that the ECD programme is being over formalised at the expense of a playful pedagogical approach that allows for the successful incorporation of IK. Further, findings reveal that most teachers who participated in this study could not effectively incorporate IK into their pedagogical practices. In cases where IK was incorporated, incorporation was minimal and often incidental in nature. This limited use of IK is fuelled by the realisation that only three out of the nine participants had a reasonably good understanding of indigenous knowledge. The others showed a partial understanding.

The teachers who showed a good understanding of indigenous knowledge are degree holders.

Key words: Early Childhood Development, ECD Curriculum; ECD Pedagogical Practices; ECD Policy, Indigenous Knowledge.

Dedication

To my wife Gladys, children Tawananyasha, Tinevimbo, Taponeswa and Tinopiwa.

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Acronyms

ECD- Early Childhood Development
ECEC- Early Childhood Education and Care
DAP- Developmentally Appropriate Practices
DBE- Department of Basic Education
DSI- District Schools Inspector
ERI- Early Reading Initiative
IK- Indigenous Knowledge
IKS- Indigenous Knowledge Systems
MoESAC- Ministry of Education, Sports, Arts and Culture
MoPSE- Ministry of Primary and Secondary Education
NAEYC- National Association for Education of Young Children
SI- Statutory Instrument
UNCRC- United Nations Convention on the Rights of the Child
ZPD- Zone of Proximal Development

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 Introduction

In the domain of education, change and innovation have always been and still remain central to curricular practice. Change and innovation in education can be necessitated by the need to reconstruct identity and history (Shizha, 2006). Thus, the incorporation of Indigenous Knowledge (IK) in education and Early Childhood Development (ECD) in particular can be seen as an answer to the call of rebuilding knowledge blocks that could have been lost over time in Zimbabwe. Shizha (2008) states that despite the end to colonialism, Zimbabwean teachers still find themselves trapped in the colonial pedagogic practice that undervalue the importance of rural school children`s experiential knowledge or what can be termed indigenous knowledge (IK). According to Ogunniyi (nd.), the experiential knowledge the children have can be equated with indigenous knowledge.

> Before I went to school, I knew a lot about my environment. I knew the names of hundreds of plants and trees and what they are used for. When I went to school, I was introduced to different names, and different systems of understanding my environment. As a result, I forgot what I had brought with me from home- just as many indigenous people may forget that they have knowledge to contribute (Ogunniyi, nd in Msimanga and Shizha, 2014. p. 138).

From the assertion above, it is worth noting that there is a missing link between modern pedagogical practices and IK. Thus, the incorporation of IK in early childhood is very practical as IK is gained mostly through everyday experiences and play. It is a well-accepted early learning principle that knowledge is drawn from the child's life world and that learning through play is a fundamental pedagogical aspect in early learning. Therefore, the incorporation of IK in early learning would make a close link between what a child learns from school and life at home. However, for successful incorporation of IK in ECD, there is a need for a grounded understanding of IK by teachers. Hence, it is the fulcrum of this study to establish the ECD teachers` understandings of IK and how they incorporate it into their pedagogical practices.

1.2 Background to the Study

Early Childhood Development (ECD) has been in the offing since the time immemorial in Zimbabwe. However, until recently, it was largely informal and undocumented. In traditional Zimbabwe, ECD invariably formed part of apprentice training for young children. It was, for example, the task of the society`s elders to teach children about adult gender roles.

It was with the advent of colonisation that ECD became more formally recognised. However, it became the prerogative of the whites and coloureds (Education Act, 1973 cited in Mugweni, 2017) to attend early learning centres. At independence in 1980, ECD became an integral part of the Zimbabwean education system and ECD services were introduced to all children in schools in 2005 (Ministry of Education, 2004). The difference in the implementation of ECD has resulted in many different understandings and interpretations of ECD provisioning.

Within the traditional context, it has been recognised as an ongoing part of the child rearing processes (Nyandiya-Bundy, Chiswanda, Khani and Matsungo, 2000). From a more formal western perspective, definitions have varied over time. Older definitions, such as those provided by Harmse, du Toit and Broeksma (1998, p. 14), suggest that ECD refers to “appropriately adapted activities designed and conducted to meet the needs of those children who have already outgrown their early infancy, but have not yet reached the school age.”

One can infer that this definition refers to preschool children between the ages of approximately three to five or six years of age. In recent years, the internationally accepted definition of ECD has been expanded and is seen as the period of a child`s life from birth to eight years (Organisation for Economic Cooperation and Development (OECD), 2006). Morrison (2008) concurs with this definition and describes Early Childhood Development as a comprehensive programme designed to meet the developmental and learning needs of children between the ages birth to eight years. ECD is further viewed by Zafeirakou (2012 cited in Mugweni, 2017, p. 316) as “a multi- dimensional process containing four basic interconnected areas of child development (birth to eight years old) namely physical, cognitive, linguistic and socio- emotional.”

Zimbabwe policy documents likewise define ECD as the period between birth and eight years (Statutory Instrument 106 of 2005). In Zimbabwe, ECD is divided into phases. These are the infant- toddler phase for children between birth to three years. This is followed by the preschool or ECD phase. This phase for children between three to five years comprises two years of schooling. Class “A” is the junior class for the younger children and “B” is the senior class. Formal schooling begins with the infant grades 1-3 for children between ages six- eight years old.

Despite the fact that the Zimbabwean policy documents acknowledge more modern definitions of ECD, the older definitions as expounded by Harmse et al. (1998) continue to influence common understandings of ECD. This is possibly due to the fact that the preschool or ECD phase is a relatively new area in the country`s education system and that the terminology is confusing. Despite ECD being recognised in policy documents as the period from birth to eight years, in reality the term ECD seems to only refer to the two years before the commencement of formal schooling. When people hear the term ECD, they usually think of ECD classes “A” and “B” and not of the entire phase of 0-8 years. Furthermore, it is possible that the policy documents themselves, albeit unwittingly, have reinforced this confusion in terminology. When the two preschool years were included in the schooling system they were named ECD.

The confusion in thinking can also possibly be explained, in part, by the long period of struggle in Zimbabwe that preschool education has gone through in order to be fully recognised as an important phase in the country’s education system. Following the recommendations of the Presidential Commission of Inquiry into Education and Training (1999) popularly known as the Nziramasanga Commission, the Zimbabwean formal education system was adjusted to incorporate the two years of ECD as the foundation for primary education. In an attempt to fulfil these requirements, Early Childhood Development Class “B” was introduced in January

2005 with the intention of introducing a second class for younger children known as ECD class `A` at a later date. According to the Ministry of Education, Sport, Arts and Culture (MoESAC) (2004, p. 3):

> One of the Commission`s recommendations calls for increased access to Early Childhood Education and Care (ECEC) for all children. Pursuant to the attainment of this two phased approach, all primary schools will, with effect from 2005, be required to attach at least one ECEC class of 4 to 5 year olds.

Consequently, from 2005, the Ministry of Education, Sports, Arts and Culture "…instituted each government school in Zimbabwe to attach at least two Early Childhood Development classes for children in the 3 to 5 year age group" (Dyanda, Makoni, Mudukuti and Kuyayama, 2005, p. 15). The introduction of ECD was an attempt to correct the imbalances created by the colonial system which, as previously mentioned, had provided nursery education to only white and coloured children.

One of the aims of introducing ECD into the Zimbabwean education system was to increase access and provide young children with an adequate knowledge, skills, attitudes and values base to promote success in the formal school situation (Ministry of Education, 2004). In the formal school situation, the focus becomes western or scientific knowledge.

There are generally different forms of knowledge in the world`s education systems. These include Western or scientific and indigenous knowledge. Western knowledge is that knowledge which was introduced to the indigenous people with the advent of colonisation whereas indigenous knowledge is the knowledge the natives had before colonialism (Nyota and Mapara, 2008).

Indigenous knowledge (IK) is also referred to as traditional knowledge, traditional ecological knowledge or local knowledge. It is knowledge embedded in the cultural traditions of regional, indigenous or local communities. According to Greinier (1998) IK is the unique, traditional, local knowledge existing within and developed around the specific condition of women and men indigenous to a particular geographical area. Thus, indigenous knowledge should not support backwardness but rather it should promote a strong cultural identity. The importance of indigenous knowledge is supported by the United Nations (2007) Article 14 (1) which argues that indigenous people have the right to establish and control their education systems and institutions in a manner appropriate to their cultural methods of teaching and learning.

Nyota and Mapara (2008) acknowledge that indigenous knowledge is expressed in a variety of ways including stories, legends, folklore, rituals, songs, games and even laws. Emeagwali (2003) asserts that the community is recognised as a source of strength for indigenous knowledge in terms of the discovery process and knowledge production. Thus, in this study, indigenous knowledge includes traditional knowledge that is often contained in stories, games, songs or rhymes and language; thus IK is closely aligned to cultural practices.

To this end, the incorporation of indigenous knowledge systems in ECD contributes immensely to the development of the learners as it is an important early learning principle that content should be culturally relevant (Gordon and Browne, 2011). This argument is supported by Vygotsky's (1978) assertion that learning is situated within a particular culture and society which enables knowledge become contextually defined and relevant. A more detailed definition of indigenous knowledge and the contentions surrounding is discussed in Chapter 2.

As part of embracing indigenous knowledge within the Zimbabwean education system, SI 106 of 2005 states that ECD teachers should use the language best understood by the learners. This refers to the mother or first language as the Zimbabwe Education Act (1987) as amended in 2006, clearly states that ECD learners must be taught in the mother language. According to Haralambos and Holborn (2008) language is a significant part of a people`s culture and thus the mother language makes an important contribution towards what is perceived to be indigenous knowledge.

1.3 Statement of the Problem

Since the turn of the twenty-first (21st) century there has been increasing interest in the place and value of IK within education systems. Indigenous knowledge is an emerging area of study that focuses on the ways of knowing, seeing, and thinking that are passed down orally from generation to generation (Semali and Maretzki, 2012). There is currently a renaissance of interest in indigenous knowledges, after a long period of neglect and disdain by western scientific and academic establishments. Responding to the world call, Zimbabwe, for the past decade, has been calling for the realigning of the education curricula to incorporate indigenous knowledge thereby making the education more relevant to the country`s and learners' needs. As recently as 2012 when officially opening the 2012 Research and Intellectual Exposition, the then President, Robert Mugabe, said that the African University should serve its role as an agent of the continent`s political, social, technological and economic development. It should not produce students who are totally divorced from and alien to Africa`s needs (*The Herald*, 5 September 2012).

To heed this call, both subject content knowledge and pedagogical practices should be informed by indigenous knowledge. Given that ECD is the foundation of the Zimbabwean education system and that young children learn best in circumstances that meet their specific contexts, ECD practices should be strongly underpinned by indigenous knowledge but, Dziva, Mpofu and Kusure (2011) note that this is not necessarily the case. Zimbabwean education policy and syllabus documents bear little resemblance to learner culture. Ayasi (2003) claims that the main activities of the policy frameworks in Zimbabwe are centred on resources and service provision and not on forms of knowledge creation.

From my experience as an ECD lecturer in teacher education, very little about IK is purposefully taught to student teachers in colleges. This is seemingly also apparent in ECD classes in schools. ECD teachers appear to make little if any use of IK. From the observations made when visits to schools are made, it appears that despite the call for ECD practices to be culturally and contextually relevant, young children in Mutare District are not being immersed in appropriate IK relevant curricula. Thus, this research explores ECD teachers' understandings of IK and how this knowledge can be included in their pedagogical practices.

1.4 Main Research Question

How has indigenous knowledge been understood by Early Childhood Development teachers in Zimbabwe and incorporated into their pedagogical practices?

The following sub questions have been formulated to further explore this question:

1.4.1 Sub Questions

1) What are the teachers` understandings of indigenous knowledge?
2) How and to what extent does indigenous knowledge inform teachers' classroom practices?
3) What strategies can be identified by teachers to better incorporate IK into their pedagogical practices?

1.5 Rationale

Studies such as those by Shizha (2007) and Matowanyika (1997) have indicated that formal education in some African countries, including Zimbabwe, undervalues the importance of the knowledge that indigenous people hold. These studies have further acknowledged the complexities involved in incorporating indigenous knowledge in the school curriculum. In addition, there have been repeated calls (Shizha, 2006, Dei, 2001) to realign the education curricula to include aspects of IK. This is especially important for the ECD phase where IK is frequently transmitted through the mother language.

Furthermore, my own experience in the field has confirmed that ECD teachers do not appear to be including relevant IK in their teaching practice. Given the significance of including IK in the ECD curriculum it is germane to investigate teachers` understandings of IK and the extent to which they have incorporated relevant indigenous knowledge into their practice. Finally, by exploring strategies teachers identify, in order to better enable them to include IK in their practice. Teachers have an opportunity to contribute positively to the study and to have their opinions validated. By contributing positively to this study and having their voices heard, it is envisaged that teachers will be more willing and able to include IK into their teaching practices.

1.6 Research Assumptions

The research is underpinned by some general assumptions. Firstly, the researcher assumes that in line with policy all the primary schools in Mutare district have both ECD class A and ECD class B. This follows the pronouncement of the Ministry of Education that all schools should have ECD classes A and B by 2011 (Principal Director`s Circular, 2011).

A second assumption is that all the schools are following the ECD curriculum for 3-5 year old children as guided by the Ministry of Education (ECD syllabus, 2012). Another assumption is that all the ECD classes are taught by ECD teachers who hold some form of teaching qualification; a Diploma in Education, or an appropriate teaching degree or a paraprofessional qualification with some form of training in ECD. In addition, though it is assumed that teachers impart both western and indigenous knowledge during the learning and teaching process, this research as previously mentioned, determines the extent to which relevant indigenous knowledge is incorporated into their pedagogical practices.

Finally, it is also assumed that the ECD teachers who participate in this study have all heard about indigenous knowledge even if only in passing. The researcher endeavours to confirm these assumptions during the study as he interacts with teachers.

1.7 Significance of the Study

The study aims to determine how indigenous knowledge is understood by ECD teachers and how they incorporate IK into their pedagogical practices. Findings help clarify what is understood by the term indigenous knowledge within the Zimbabwean ECD context and the way it is viewed and implemented by ECD teachers. Findings also inform ways in which IK could be included or incorporated in the ECD classroom. Through this study, it is envisaged that ECD teachers assists in making the curriculum more relevant or meaningful for children as it aims to investigate what type of knowledge teachers` value as IK and how this knowledge is shared with children.

In addition, the findings could be useful for both policy developers as well as policy implementers as to date there is little evidence that IK is adequately incorporated in the schools. This can in turn inform both the ECD curriculum and proposed methodologies that are shaped by policy. It is also envisaged that this research study can be of significance to the education inspectors who supervise the ECD programmes. If there is a greater understanding or insight of what ECD teachers view as indigenous knowledge and how it could be included in the ECD context education inspectors will be able to supervise this learning phase of education more effectively.

In sum, the research has the potential to be of significance to ECD teachers, curriculum planners, government officials, and other researchers. It will also be of value to the researcher himself as it will offer an important opportunity for further professional growth.

1.8 Location of the Study

The study was carried out in Mutare district of Manicaland. Manicaland is the eastern province of Zimbabwe. Mutare is the third largest town of Zimbabwe and forms part of Mutare district. The Mutare district can be divided into three zones namely: urban, peri-urban and rural. To the west, it borders Buhera district, to the east, it borders Mozambique, to the south it borders Chimanimani and to the north it borders Makoni district. Mutare district is approximately 250km south-east of Harare. Mutare district has two distinct geographical features which are the urban area and the rural areas. Most urban residents are average to below average earners. The rural population is generally poor since some come from the dry areas and survive on stream bank gardening projects and vending. Manicaland province and Mutare specifically are shown by the arrow on the Zimbabwe map in Figure 1.1 below.

Figure 1.1: Map of Zimbabwe (Adapted from http://www.ephotoix.com/image/africa/zimbabwe-political map.)

1.9 Some Conceptual Ideas Underpinning This Study

I present a short overview of the conceptual ideas which underpin this study. I firstly, explore meanings of indigenous knowledge systems (IKS and indigenous knowledge. Thereafter, I briefly examine what constitutes quality ECD practices because within the broader education system there is scant understanding of this notion.

1.9.1 Indigenous knowledge systems

Grenier (1998 in Odora- Hoppers 2004) says IKS is the sum total of knowledge and skills which people in a particular geographic area possess, and which enable them to get the most out of their natural environment. For the purposes of this study, IKS includes many aspects like culture, skills and various bodies of knowledge such as child rearing practices. In supporting this view; Mpofu, Mushayikwa and Otulaja (2014) assert that IKS is a very broad field and as a system of knowledge, it embodies many knowledge strands which are complex, such as `*unhu*` which means personhood, health, and culture. The South African Department of Education (2003, p. 4) says:

> IK systems in the South African context refers to a body of knowledge embedded in African philosophical thinking and social practices that have evolved over thousands of years.

IKS are dynamic, and are continually influenced by internal creativity and experimentation as well as by contact with external systems (Warren, 1991). To support this claim, Hewson and Ogunniyi (2011, p. 680) contend that knowledge systems which existed in numerous parts of the non- western world before the advent of colonialism are referred to as indigenous knowledge. For this study, I will work with the concept IK derived from IKS.

1.9.2 Indigenous knowledge

As previously mentioned, the term IK has recently become a popular narrative in the education system. The increasing attention IK is receiving by academia and the skills development institutions such as Teacher`s Colleges and Universities have not yet led to a unanimous perception of the concept of IK. None of the definitions are essentially contradictory; they overlap in many aspects (World Bank, 2007) However, according to Dei (2002) defining the term indigenous knowledge and establishing working boundaries has been problematic since some claim that indigenous knowledge does not exist (Horsthemke, 2008).

In order to come to a definition of indigenous knowledge, it is imperative to first define the terms knowledge and “indigenous”. Knowledge is the information, understanding and skills that you gain through education or experience (Bolisani and Bratianu, 2010). Philosophically, there are different forms of knowledge such as rationale, procedural, and disciplinary and these cut across IK. These different forms of knowledge and how they align to IK will be interrogated in detail in chapter 2.

Indigenous knowledge is place-based knowledge rooted in local cultures and mostly associated with long settled communities, which have strong ties to their natural environment (Orlove, Rincoli, Kapugo and Majugu, 2010). According to Greinier (1998 cited in Schafer, Ezrim, Gamurorwa, Ntsonyane, Phiri, Sagnia, Salakana and Bairu 2004, p. 63) indigenous knowledge is “the unique, traditional, local knowledge existing within and developed around the specific condition of women and men indigenous to a particular geographical area.” This means that IK is as diverse as the people`s cultures. Indigenous knowledge can be described as:

> that knowledge that is held and used by a people who identify themselves as indigenous of a place based on a combination of cultural distinctiveness and prior territorial occupancy relative to a more recently arrived population with its own distinct and subsequently dominant culture (International Labour Organisation, 1989: Article 1 cited in Odora- Hoppers 2005, p. 2).

In other words, IK is local knowledge – knowledge that is unique to a given culture or society. IK contrasts with the international knowledge system generated by universities, research institutions and private firms. It is the basis for much of the local-level decision making in agriculture, health care, food preparation, education, natural-resource management, and a host of other activities in rural communities (Warren, 1991).

Furthermore, IK is the information base for a society, and it facilitates communication and decision-making. Semali and Maretzki (2012) define indigenous knowledge as an emerging area of study that focuses on the ways of knowing, seeing and thinking that are handed down orally from generation to generation in areas like agriculture, child rearing practices, education system among many other categories. Takawira (2002) propounds that IK is the local community based knowledge that is unique to a given culture and often developed over generations and it reflects the commonly held norms and values of a society. In this vein, culture refers to a complex whole which includes knowledge, beliefs, art, law, morals and customs acquired by man as a member of society (Giddens, 1993). Hence, IK is that knowledge people in a society have to sustain their culture. Dei (2002) defines IK as a body of knowledge associated with the long term occupancy of a certain place and is shaped by the traditional norms and social values of a given society. Ogunniyi and Ogawa (2008) claim that the migratory characteristic of people makes it difficult to think of IK in an absolute manner.

Chavunduka (1995) has a slightly different understanding of IK. He simply referred IK as “African”, meaning it is knowledge for the Africans by the Africans. This definition however, seems to be limited in scope. The African notion of knowledge cannot go unchallenged for it appears to be biased and seems to suggest that non – African do not have IK.

Westerns also have their IK. Westerners however ended up partially displacing the local people`s existing IK (Hewson and Ogunniyi, 2011). It can therefore be argued that IK exists in western and non- western worlds, and that IK still exists among different ethnic groups in Zimbabwe.

Pence and Schafer (2006 p. 2) assert “indigenous knowledge is integrated in culturally- mediated world views and tends to be holistic.” There are some similarities in this way of thinking about IK that can be aligned to practices in current ECD approaches which target the holistic development of the child. IK, like traditional child rearing practices, calls for a holistic approach; hence the two can comfortably co-exist in ECD. IK guarantees a stronger base for learning in ECD for it is culturally and contextually appropriate.

Based on the above arguments, IK should be viewed as a compromise of many knowledge sources. Within the ECD context therefore, I would argue that IK should not be considered as the only form of knowledge but that it should be acknowledged, its attributes recognised and given an important place in the ECD curriculum as well as in pedagogical practices.

1.9.3Towards an understanding of the ECD programme in Zimbabwe

ECD in Zimbabwe was ushered in with the Secretary`s Circular 14 of 2004. Schools were mandated to attach the ECD class in 2005 and ECD A class in 2006 (Mugweni, 2017). However, this was revised through Director`s Circular 12 of 2005 to the effect that the ECD class A was to be introduced in 2010. The Zimbabwean ECD was then influenced by views from various scholars. In particular, the Zimbabwean ECD approach seems to have been influenced by early nineteenth century English models such as those introduced by the Macmillan sisters and Owen`s Infant

School. More recently the developmental perspective such as the developmentally appropriate practices DAP has also influenced ECD implementation in Zimbabwe. Thus current approaches to ECD in Zimbabwe stem from Zimbabwe`s colonial past (Dyanda, Makoni, Mudukuti and Kuyayama, 2005).
This has resulted in the approach to ECD in Zimbabwe being informed by different theories and theorists and as a result Zimbabwe has adopted an eclectic approach to her ECD model (Dyanda, et al, 2005).

From a western perspective, there is an emphasis on the individual child and on children reaching specific developmental outcomes (Bruce and Meggitt, 2005). This perspective is in contrast with that of African culture which believes in collectivisation (Chavunduka, 1995) which is therefore contrary to the western notion of individual learning. This too has consequences for ECD curriculum delivery within the Zimbabwean context and these issues will be explored in more detail in chapter 2.

1.9.4 Unpacking the early childhood curriculum

According to Bruce, Meggitt and Greiner (2010) the ECD curriculum framework has three determinants namely the child, the context and the content. These are sometimes called the 3c`s of the ECD curriculum. The 3c`s are illustrated in Figure 1.2 below:

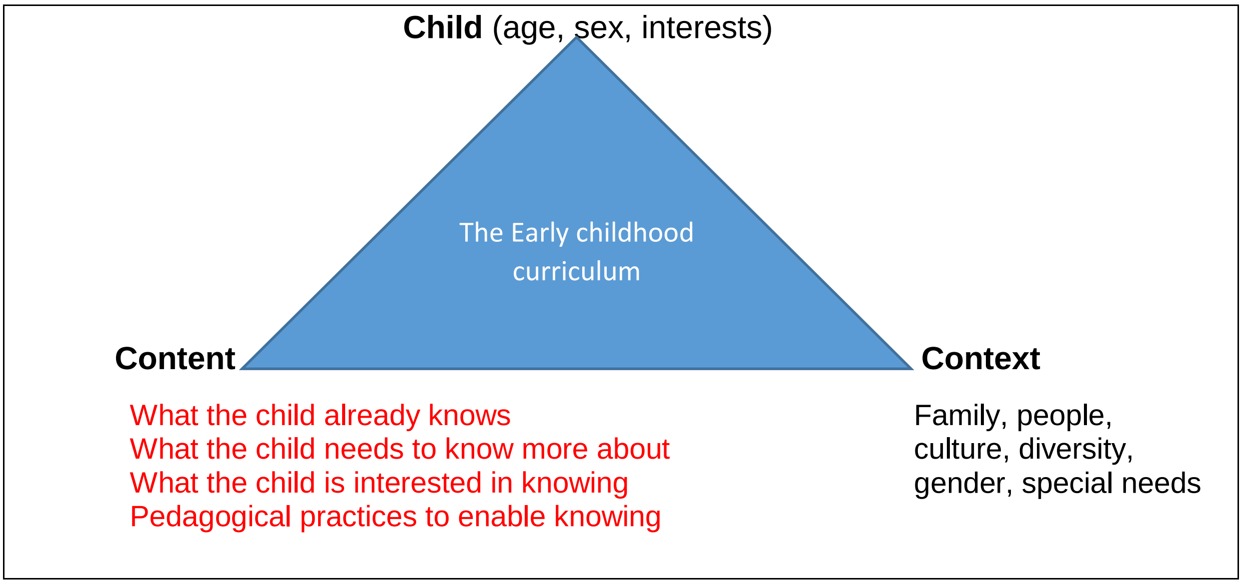

Figure1:2 The 3c`s of the ECD curriculum (Bruce et al., 2010, p. 377).

Bruce and Meggitt (2005) state that when planning and designing an ECD curriculum, these three aspects of the ECD curriculum need to be considered and balanced. Failure to strike a balance leads to producing a substandard curriculum. Balancing the 3c`s makes play more central to the child`s learning and promotes the development of the whole child. It also strengthens the incorporation of IK in ECD because acknowledgement of relevant content which draws on IK as well as context is fundamental to curriculum planning and implementation.

The thrust of the ECD curriculum is thus to ensure the total development of the child, laying a foundation for successful living and this can relate to the developmental underpinnings and the eclectic nature of ECD (Minnet, 2005). The child`s learning should be underpinned by movement and dance, music and song, and communication. There should be rich opportunities for symbolic play and for children to self-regulate their behaviours through meaningful playful learning and teaching strategies. Thus the child’s learning opportunities should draw heavily on IK (Bruce et al, 2010, Morrison, 2001). The learning process can be culturally appropriate and contextually relevant if it includes relevant IK.

1.9.4.1 The child

A basic tenet of quality ECD is that the child should be central to the ECD curriculum. This has become known as child-centred practice (Morrison, 2001). However, views of children have themselves changed over time, according to different cultural constructions of the role and place of children within particular communities and societies (Cannella, 1997). Sorin and Galloway (2005) proposed a template for childhood that presents ten different constructs that can be implemented in early childhood practice. The constructs namely the innocent child, snowballing child and evil child to mention but a few help the ECD teacher to understand how children are perceived by society in general.

Such perceptions influence teachers' pedagogical practices. For example, does the teacher view the child as a dependent being who needs to be given knowledge? Or is the child seen as competent and capable and able to make choices? Such views will influence teaching strategies and how the teacher incorporates (or not) IK into her teaching practices.

1.9.4.2 The context

Traditionally, at least in Western contexts, early childhood education has been regarded as a context for children to engage with and explore their worlds, without pressure to engage in formal learning or instruction (Cuban, 1992, Seefeldt and Wasik, 2002). According to Bruce et al. (2010), Anning, Cullen & Fleer (2009), Ndawi and Maravanyika (2011) the context involves family, culture, diversity, gender, special educational needs, access, materials and resources, places and events. Therefore, within an ECD context, IK which draws on local, traditional practices, should be incorporated into all ECD practices and should form the foundations upon which the ECD curriculum is developed. This, therefore, becomes another justification for investigating ECD teachers` understandings of IK and its inclusion in their ECD pedagogical practices.

1.9.4.3 The Content

An important focus of the ECD curriculum is the content. Phenix (1962), cited in Lunenburg (2011) describes content as including the whole range of matter in which the child is expected to gain some knowledge. In addition, Lawton (1972 cited in Ndawi and Maravanyika, 2011) describes a curriculum, especially the content, as a selection from culture. Hence, what is learnt in ECD must be relevant to the child`s everyday life and thus salient content is best drawn from the child`s community and should thus be informed by IK.

Content includes the values, attitudes, knowledge and skills to be mastered by the children. In order to ensure relevant content, three critical questions that underpin content selection should be answered. These are: (1) what the child knows? (2) What the child wants to know and (3) what the child needs to know (see Figure 3.1) (Bruce, 1997). Thus, selection of content considers their interests, what the children already knows and what they are expected to know as determined by the society in which they live.

By introducing societal knowledge requirements children are supported to become functional and relevant in their society. This societal requirement underpins a strong argument for introducing an IK component in addition to other appropriate knowledge into the curriculum. I argue, therefore, that all the activities and learning experiences which foster development and learning becomes part of the content and in quality early childhood development where play opportunities are paramount IK becomes an essential part of the ECD curriculum.

1.9.4.4 Pedagogical practices in ECD

As mentioned previously the curriculum comprises the 3cs. However in addition to the teacher being contextually responsive and considering what s/he teaches (content) good pedagogy considers how he/she teaches it (methodologies). Stephen (2006) notes that pedagogy will be influenced by the beliefs about learning that underpin curriculum. Thus, curriculum and pedagogy are closely linked.

Pedagogy refers to that set of instructional techniques and strategies which enable learning to take place and provide opportunities for the acquisition of knowledge, attitudes and dispositions within a social context (Siraj-Blatchford, Silva, Muttock, Gilden and Bell, 2002). Suitable pedagogies are central in imparting any form of knowledge, including IK. In the ECD context playful teaching and learning are regarded as being the most effective way of promoting early learning. These concepts are explored more deeply in chapter 2.

1.10 Theoretical Framework

The study is informed by Vygotsky`s (1978) socio-cultural theory which is a social constructivist theory that promotes the co- construction of knowledge where both the child and the teacher actively engage collaboratively to construct knowledge. According to Vygotsky (1978) learning is situated within a particular culture and society which enables knowledge to become contextually defined and relevant. Vygotsky (1978, p. 78) says, “We become ourselves through others.” This collaborative view of learning is closely aligned to the traditional African notion of learning. Children learnt skills with the assistance of others. Vygotsky (1978) argues that development and learning is strongly entrenched in culture. Culture is the people`s total way of life, their food, knowledge, norms and values (Giddens, 1993). Hence, Vygotsky`s theory becomes important in informing this study as indigenous knowledge is embedded in communities way of life and this IK becomes an essential part of the children`s culture.

Vygotsky`s (1978) socio-cultural theoretical perspective seeks to explain the growth of an individual in terms of opportunities, guidance and support provided through the broader cultural context (Daniels, 1999). The central idea is that, knowledge is socially constructed through interaction with a more capable other person. Dockett and Perry, 2006 support current perspectives of children`s learning that embrace situative or socio-cultural views of learning in which approaches to learning and teaching are embedded within specific cultural contexts. Such cultural contexts are viewed in this research as the fertile ground for IK to be used in the teaching and learning of children in ECD settings. In this context, the teachers` understandings and implementation of IK is imperative. Hence, socio-cultural theory is an appropriate informing theoretical framework for this study.

Another Vygotskian (1978) principle which gives relevance to the notion of IK is the notion of the Zone of Proximal Development (ZPD). Everyday knowledge often stems from IK (Chavunduka, 1995). Vygotsky (1978, p. 86) describes the ZPD as "the distance between the actual development level of development as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or collaboration of more capable peers." The idea of the ZPD resonates with an important ECD principle that learning should begin with that with which the child is familiar (Morrison, 2004).

Thus, the child's learning journey begins with the knowledge gained in everyday life which is predominantly indigenous. The teacher, through making use of IK can support the child to reach greater understandings of concepts that would otherwise have been too difficult for the child to grasp. In this way, IK can become a 'scaffold' for later academic learning. IK is important in ECD for it helps to create a ZPD in the form of basic concepts, beliefs and attributes that could be further developed into other forms of knowledge. IK should also be the knowledge that informs the point of departure in ECD teaching and learning.

For Vygotsky (1978) play is an essential element in early learning as it helps children to make sense of what they learn, because during play, they are free from all the practical constrains of real life situations (Bruce and Meggitt, 2005). According to Vygotsky (1978, p. 101), "in play a child is a head taller than himself". Thus IK that might be expressed through and in games and song which are play-based learning opportunities are valuable components of any ECD curriculum. These forms of expression should be frequently utilised during the ECD day. To this end, the incorporation of IKS and IK in ECD would contribute immensely to the holistic development and learning of the children as it is an important early learning principle that content and context should be culturally relevant (Gordon and Browne, 2011). These aspects are explored in more detail in chapter 3.

Language is another important principle in socio-cultural theory since it is culturally determined and is regarded as the thinking tool (Vygotsky, 1978). It is an essential tool for imparting knowledge, especially IK (Pence and Schafer, 2006). In Vygotsky's (1978) terms language is an essential mediating tool (see section 3.3.3).

In brief, therefore, the key principles of socio-cultural theory are culture, language, social interaction with a more knowledgeable other, working in the zone of proximal development (ZPD) and learning through play (Vygotsky, 1978). Some of these ideas are discussed in greater detail in chapter 3.

1.11 Research Methodology

Chapter 4 describes how the research has been conceptualized and planned. Research methodology is a way to systematically solve the research problem. In it we study various steps that are generally adopted by the researcher in studying his research problems along with the logic behind them (Rajasekar, Philominathan and Chinnathambi, 2006) to ensure that the research is systematically conducted and that there is accountability for the quality of the research as well as the research claims.

1.11.1 The research paradigm

This research study is grounded in a philosophical assumption that is largely interpretive as it aims to explore, understand and interpret a specific phenomenon or social reality namely, ECD teachers` understanding of IK and how these understandings are incorporated into their pedagogical practices.

The philosophical assumption underlying this research is social constructivism. According to Mertens (2007) this is often combined with interpretivism. Socially constructed knowledge involves understanding the life world of the participants, how they negotiate and make meaning through social and historical constructions, theory generation and multiple participants meaning (Creswell, 2003). The underlying assumption is that “individuals seek understanding of the world in which they live and work based on their historical and social perspective” (Creswell, 2003 p.8) and the researcher`s task is to interpret or make sense of the meanings that others have about the world.

This way of generating data and a pattern of meaning necessitates that this research paradigm is largely inductive. Mason (2002) recommends that qualitative research should go beyond mere description; it should produce explanations and arguments that yield rich, nuanced, complex and multi-dimensional possibilities that offer insights into how the social world is interpreted, understood, experienced, produced or constituted.

Because this research explores human perceptions such as ECD teachers` understandings of indigenous knowledge and how they incorporate IK in their pedagogical practices, a qualitative paradigm was adopted. A qualitative research design is the search for interpretation of meanings in social context that have been transferred or manipulated, but have unfolded naturally (Cohen and Manion, 2011). Gay, Mills and Airasian (2011, p. 381) assert "qualitative researchers collect descriptive-narrative and visual non-numerical data to gain insights into the phenomena of interest."

It is against the foregoing background that I chose to adopt a case study approach. According to Cohen and Manion (2011) the case study researcher typically observes the characteristics on an individual child, clique or a community. In a case study approach, the purpose of observation is to probe deeply and to analyse the life cycle of a unit with a view to assume that there are some similarities with the wider population (Chawawa, 2005). Hence, a case study approach enabled me to use appropriate methods to investigate the teachers` understandings of IK and the extent to which they incorporate IK in Early Childhood Development Class "A" and "B".

1.11.2 Research participants

According to Gay, Mills, and Airasian (2011) a population in research refers to the whole group of individuals to whom we are interested in applying our conclusions. For this study, all the primary schools in Mutare district of Manicaland constituted the population because they all have attached ECD classes (Ministry of Education, 2004, 2005 and 2010). This implies that all the ECD classes "A" and "B" comprise the population.

Frankel and Wallen (1996) assert that a sample is a small part of anything or one of a number intended to show the quality, style or nature of the whole**.** Factors such as expense, time, and accessibility frequently prevent researchers from gaining information from the whole population. For the purpose of the study, I drew a sample of three schools and two ECD teachers from each school and each one from ECD class A and B. One school and its two teachers were used for the pilot study. The schools were purposively sampled one school each from the urban area, peri-urban area and rural area in Mutare District.

The choice on schools chosen was based on convenience, geographical location and willingness to participate. Thus, schools were representative of different environments. Willingness to participate in the study by the schools was considered as an important criterion for participating in the study. The ECD teachers were selected according to the classes they teach namely an ECD "A" and "B" class teacher in the area.

Preference was given to those schools where both teachers and heads volunteered and if more than one staff member per stream, either ECD "" or "B" volunteered, I asked them pick cards written with the words "Yes" and "No". Those who picked the "Yes" cards then formed part of the sample. The headmasters/ headmistresses of the respective schools were also included in this sample. If one person did not volunteer to participate, a replacement was sought preferably from the same school. If this was not possible another school was approached to participate in the study. Fortunately, the participants all agreed and I did not have to follow this route.

I chose a relatively small sample size in order to explore the ECD teaching and learning approach in each class in some depth. Participants for this study were therefore six ECD teachers, and three school heads of which two of the teachers and the respective school head participated in the pilot study. The participants were a reasonably homogenous group in that they hold similar qualifications. They are all Shona speaking.

1.11.3 Research methods

The data collection methods used in this study included open- ended surveys interviews, document analysis and observation. The use of varied methods helped to obtain data which is valid, credible and trustworthy (Kumar, 2014; Bhebhe, 2014, Magwa and Magwa, 2015).

1.11.3.1 Survey

I administered a survey (questionnaire) to teachers (see Appendix 1) as a data collection instrument. Another survey was administered to school heads (see appendix 2). Martins (1995) defines a survey as a series of carefully planned and appropriately worded questions or items on a specific subject where respondents can fill in the answers themselves or select answer by putting a mark on the appropriate spaces provided.

In this study, I design a survey with both closed and open ended questions. The respondents ticked the answers on closed questions and filled in details in the spaces provided for the open-ended questions. The surveys were used to collect specific data such as biographical information because it minimised time needed to meet the participants directly and it allowed the respondents to give their views freely as they answered the questions from the surveys (Gall, Borg and Gall, 1996). To encourage participants to complete the survey, I hand delivered them to those participating in the study and collected them during my observation sessions.

A possible limitation was that some surveys were not elaborately and adequately completed, either because questions were not fully understood or because participants possibly chose to withhold information. These limitations were controlled through use of other methods such as the interview and, observations.

1.11.3.2 Observation

In this research, observation was another method of data collection. Tove (2010) asserts that observation is a technique where the quality of data that are generated depends on what the researcher sees, hears and interprets. Thus, the researcher himself was a key data collection instrument. Leedy and Omrod (2001) suggest that observation is a technique for gathering data that relies on the researcher seeing and recording first hand behaviours once they occur. Cohen et al. (2010) state that field notes are the observer's records of what have been observed, descriptions of the individual's setting and what happened, recapitulating the conversation and other interaction as completely as possible. Field notes should especially try to capture the language used as this reveals how people understand the situation.

I observed the activities and so explored the extent to which IK is being incorporated in the ECD classes. Observation of the ECD teachers aided the researcher to get a clearer picture of the hidden phenomenon which is teachers` understanding of IK. This was naturalistic observation, as participants were observed in their natural setting, in this case their classroom.

I observed each teacher for three to five times and for a period of approximately two to three hours per day. In instances where I felt not sufficiently satisfied with the data obtained from these observations, I requested to visit the classroom again. Observing teachers more than once helped to minimise behaviour modification techniques that teachers might use during a once off observation.

I also video recorded some observations and also asked teachers shoot some photos. Taking photos by teachers allowed for some active participation by teachers and gave the participants some agency if they are asked to make decisions about what is to be photographed (Mason, 2002). I also asked the teachers to take some photos in my absence using their cellphones or cameras and I used these to further establish their understanding and conceptualisation of what constitutes indigenous knowledge.

The observation was non- participant. However, I acknowledge that my presence during observation might have affected the interactions between the teacher and children or among the children themselves. Fortunately, by the second or third visit, children were more accustomed to my presence in the classroom and interact freely with their teacher and among themselves and not be distracted by my presence.

1.11.3.3 Interview

The interview method was also used to collect data in this study. Cohen and Manion (1992, p.126) assert that an interview is "…a two way person conversation initiated by the interviewer for the purpose of obtaining research relevant information focused on content by the specific research objectives." Hendricks (2005) alludes that in order to understand other person's construction of reality, we should ask them, and ask them in a way that allows them tell us in sufficient depth and in their terms about the rich context which is the substance of their meaning. In this study, an interview was conducted in an effort to seek clarification on some issues that emerged from observation and survey responses.

I used semi-structured and informal interviews (see Appendix 3 and 4) because they provided a more effective means of exploring the research questions that are focused on involvement and value dimensions (Mason, 2002). Such interviews call for clear responses and offer a space to probe and explore other related issues. Semi-structured interviews are useful because they ensure that the researcher has asked almost the same question to all the participants. At the same time they provide opportunities for follow up questions to clarify the issues under discussion and provide a space to explore other possibilities should these arise (Punch, 2005). I visited the participating schools and held interviews with teachers and school heads at a time convenient to them.

1.11.3.4 Document analysis

Document analysis is another method I used to collect data. Document analysis can also be referred to as record method. It is non-reactive since there is no physical interaction between the researcher and the participants. Document analysis is the evaluation of records on the phenomenon being studied (Maree, 2007). Records that were studied were education and ECD policy documents so as to establish the place of IK in ECD practice. The policy documents included Statutory Instrument 106 of 2005, Director`s Circular 12 of 2005 and Director`s Circular 48 of 2007.

1.11.4 Data analysis plan

Analysis of data involves understanding complexities, detail and context. I adopted an interpretive and reflective approach that allowed me to probe the phenomenon under scrutiny. Data were coded according to themes that were determined from the research questions, literature review and data set. The data was analysed for similarities, differences and code absences (the absence of coded data in certain transcripts).Tables were used to present data. These were accompanied by statements of description analysing similarities and differences.

1.11.5 Ethical considerations

I endeavoured to uphold the ethics of research. The participants were appraised on the purpose of the study. I gave them the opportunity to choose to participate or not in this study. Participants were told that they are free to withdraw from the research anytime they wish. Confidentiality of participants and their responses was assured and ensured. Findings remained confidential and were used for no other purpose except for this research, professional reports and publications.

I asked all participants to sign an informed written consent form. Names of participants and participating schools were not be used, instead pseudonyms were used during data presentation and analysis. Participants were assured that data gathered will be kept safely and destroyed after three years upon completion of the study. In a quest to ensure confidentiality, participants were asked not to discuss what transpired during the study. Letters to obtain official consent were written to Zimbabwe`s Ministry of Primary and Secondary Education in 2015.

Ethics clearance was obtained from the university before the data collection process commenced. The participating teachers were observed teaching after getting permission from them and the school heads and the parents on behalf of their children. The children were also asked to consent to participate in the study because they were classroom participants who were also being observed. During observations, if signs of distress are noticed in children, the researcher would stop the study in that classroom. Thus, participation was both voluntary and invitational.

School visits were planned in advance to minimise disturbances and discomfort to the participants. Interview times were negotiated with the participants so as to minimise inconveniences. Clarifications were sought when responses seemed to be ambiguous to avoid subjective assumptions from the researcher. Data transcribed was sent to participants for comments and clarifications where necessary.

I also engaged in ongoing self-reflection in an effort to minimize any possible researcher bias. The focus of the photos and videos was on the classroom, and activities done by children. In case children were photographed, their faces were blinded so that they could not be recognised by any other person. This assisted in giving participants assurance that the data will not be made public (See Appendices 5, 6, 7 and 8) for a copy of the information and consent letters.

1.11.6 Pilot study

A pilot study is a study that is carried out on a small scale with the primary aim of testing the research instruments. The pilot study assisted in checking for issues like ambiguity and vagueness of questions. As Oppenheim (1996: vii in Chawawa 2005, p. 307) notes “the world is full of people who can write plain English and has a modicum of common sense and can produce a good questionnaire…common sense and ability to write plain English will help, but that will not be sufficient.” This means it is not enough to write good English in research but also critical to make sure that your participants understand what you want to get from them. Thus it is important to have a pilot study to try and ascertain that the instruments are well constructed and measure what it is they are intended to measure.

A small scale pilot study was carried out in one school within the Mutare district. After obtaining the necessary consent, the researcher collected data at one school. The participants responded to the instruments without any challenges and thus the instruments were adopted as initially complied. The pilot study also provided an opportunity to confirm (or not) the research assumptions. The pilot study was carried at Vambai School with two ECD teachers and the school head.

1.12 Limitations

The researcher anticipated some challenges during the research process. One of the limitations was researcher bias where I might have omitted some data which could have been useful for the study. However, to mitigate this possibility observation was followed by an interview. Both data gathering methods were well documented. The video tapes also provided an opportunity to review data after the event which should also help to limit the research bias. In addition, I adopted a self- reflective approach and keep a reflective journal during the research process that helped me to counter research bias.

1.13 Overview

The research study is organised in seven chapters. Chapter one focuses on the introduction of the study. The main aspects addressed include the background to the study, statement of the problem and research questions. Generally, it gives the synopsis of the study.

Chapter two focuses on the review of related literature in relation to ECD curricula, pedagogical practices and IK.

Chapter three focuses on the theoretical underpinnings. The theoretical framework is informed by sociocultural theory.

Chapter four presents the research methodology which describes on the research design, methodology and research instruments.

Chapter five focuses on presentation of the data collected or findings. These are written up as three vignettes or case studies.

Chapter six unpacks the data presented, discussing the findings and the analysis thereof.

Chapter seven contains the summary of findings, conclusions of the study and recommendations.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter I review literature and give an overview of some of the conceptual ideas which underpins this study. Firstly, I briefly explore different forms of knowledge because IK cuts across all forms of knowledge. This includes an exploration and comparison of the meaning of knowledge from a western perspective as well as from an indigenous perspective. I then explore the history of education in Zimbabwe with particular reference to ECD. I further show how ECD in Zimbabwe has been located in a more formalised space and how tensions that emanate from western systems, including various philosophical and theoretical underpinnings have influenced current ECD practices in Zimbabwe. This includes firstly a brief overview of some of the theorists who have influenced ECD and secondly an exploration of ECD practices.

I also interrogate the ECD curriculum and teachers` pedagogical practices. Finally, I examine the place of IK with in the ECD learning space. I then conclude the chapter by arguing that these influences on ECD in Zimbabwe have negatively influenced the incorporation of IK in the ECD programme.

2.2 What Is Knowledge?

Knowledge is elusive. Defining and explaining the nature of knowledge proved to be elusive and without a convincing and universally accepted result (Bolisani and Bratianu, 2018). It is elusive because it is a very philosophical term. It has different meanings for different people. According to Ayer (2009) knowledge is culturally and contextually dependent. In the West, the knowledge system has been influenced by both the ancient Greeks and Romans. Greek philosophers, considered to be the fathers of Western Philosophy include Plato, Aristotle and Socrates. Arguably, the most influential Roman thinker was Quintilian. Up until today, an understanding of what constitutes knowledge and knowledge production continues to be debated. Thus, knowledge is not static; it is dynamic and changing.

According to Aristotle (cited in Mele and Canton 2014, p. 110), “knowledge is not innate but starts in the senses and intuition.” This means that people need to use both their minds and environments to get a deeper understanding of knowledge and what it means. Hirst (cited in Gibble, 2007) argues that knowledge involves the use of symbols and the making of judgements in different ways. This understanding of knowledge resonates strongly with understandings of IK. IK as a knowledge system also has its symbols and is also acquired through traditional practices. But, unlike Western knowledge IK has not been classified and categorised in the same way.

Knowledge, from a Western perspective can be classified in different ways. A popular classification and one that informs educational endeavours is to view knowledge through three differing lenses, namely rational, procedural and disciplinary knowledge. Each type of knowledge will be briefly explained and as mentioned earlier in chapter 1. I argue that these different forms of knowledge cut across IK and in so doing it becomes possible to align aspects of IK with these different three types of western knowledge.

2.2.1 Rational knowledge

Rationality has been extremely influential in western knowledge systems and underpinned the positivist movement which was very strong in the twentieth century (Bolisani and Bratianu, 2018). Rationality entails a specific capacity for understanding, termed “reason” which is precisely the key feature that distinguishes humans from other animals (Mele and Canton, 2014). Rationale knowledge is that which allows for one to reason, make verification through a process and make judgement on a given phenomenon. Rational knowledge is knowledge we believe is true because it seems reasonable, and fits in with other things we know are true. When using rationale knowledge, people reach for conclusions based on some given assumption which follows certain logic. Such conclusion may or may not be correct, for example, beliefs. Rationale knowledge resonates with IK as they both allow for making judgements.

2.2.2 Procedural knowledge

Procedural knowledge is also known as empirical knowledge exercised in the performance of a task. Empirical knowledge is that which is obtained through sensory interface with the world and it is finally processed with the mind (Bolisani and Bratianu, 2018). According to Mele and Canton (2014) procedural knowledge is like a toolbox which includes facts, procedures, algorithms or methods. It is learning that involves only memorising operations with little understanding of underlying meaning (Arslam, 2010).

Procedural knowledge is mostly concerned with the "how" part of doing things and no the "why". Thus, procedural knowledge resonates well with IK as some beliefs and values are not questionable but followed religiously. IK has more to it even it is sometimes procedural, it is surely more than just procedural. In addition, learning in IK is more inclined to apprentice modelling where children follow procedures. They obtain knowledge through following instructions and procedures as given by the adults. Knowledge is rooted in the sensory system and only in its final processing stage is open to abstract considerations (Bolisani and Bratianu, 2018).

2.2.3 Disciplinary knowledge

Disciplinary Knowledge is a term used to describe types of knowledge, expertise, skills, people, projects, communities, problems, challenges, studies, inquiry approaches, and research areas that are strongly associated with academic areas of study (Fagin, Halpern, Moses and Vardi, 1995). From the definition, disciplinary knowledge is synonymous with subject content and skills. This, however, came with the advent and western knowledge and school system. Disciplinary knowledge can be equated to knowledge of a trade in IK, for example, child rearing practices or medicine (herbalism). However, in IK, one does not focus on one aspect in a trade for example, in child rearing practices, one also learns of herbs so as to be able to take care of the child during the process (Nyandiya-Bundy et al, 2000). IK is not segmented into disciplines but the areas it is used a generic in nature.

2.3 Indigenous Knowledge

As noted earlier in Section 1.9.2, the term IK has recently become a popular narrative in the education system. Mugabe (1988) defines IK as knowledge that is held and made use of by people who regard themselves as indigenous to a particular place. IK is a multifaceted body of knowledge, practices and representations that are maintained and developed by peoples with long histories of close interaction with the local environment (Owuor, 2007). Flavier et al (1995) present the view that IK is the information base for a society, which facilitates communication and decision making. Indigenous information systems are dynamic, and are continually influenced by internal creativity and experimentation as well as by contact with external systems such as technology.

From the definitions above, insights obtained indicate that communities possess specific knowledge and skills which are localised and utilised by people to learn their livelihoods through interaction among themselves and with their environment. The knowledge evolves, develops and is sustained from one generation to the next through process of socialisation. IK therefore not imposed or imported, it is a social construct of people of a particular community. However, Wane (2002) argues that in the process of knowledge transmission, new knowledge is discovered hence the dynamic nature of IK. Thus, it is difficult to have IK into its original form. Posey (1989, p. 241) says:

> Indigenous" applies to people who have historical continuity with the pre-invasion and pre-colonial societies that have developed their own territories and who consider themselves distinct from other sectors of society now prevailing in those territories. At present the indigenous people are dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, their ethnic identity as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social interactions and legal systems.

Chavunduka (1995) has a slightly different understanding of IK. He simply referred IK as "African", meaning it is knowledge for the Africans by the Africans. This definition however, seems to be limited in scope. The 'African' notion of knowledge cannot go unchallenged for it appears to be biased and seems to suggest that non – Africans do not have IK. Westerns have their IK as well. However, over time, much of this IK has been refined and incorporated into the different knowledge types mentioned in 2.2 which have become the dominant knowledge forms that have been imposed on many different educational systems. Thus, Western interpretations of knowledge have ended up partially if not totally displacing the local people`s existing IK (Hewson and Ogunniyi, 2011).

According to Shizha (2008) many Africans tend to despise IK and their own cultures in general, maybe because of colonisation and foreign influences. Thus, it becomes important to establish that African indigenous knowledge is worthwhile knowledge that can be readily expressed through Shona indigenous games, song, stories and riddles. Some indigenous knowledge has continued to exist in its original form while some has vanished or changed with time such as child rearing practices.

However, based on the previously mentioned definitions of IK, despite IK being displaced a strong argument can be made for the existence of IK among different ethnic groups in Zimbabwe. However, in modern times it must be conceded that IK alone cannot drive an education system.

IK on its own be used to correct the colonial ills of westernisation of the African education systems (Horsthemke, 2008). Horsthemke (2008) argues that a more integrated approach to knowledge creation is needed. Chisholm (2005) supports this view when she cites critics such as Muller (2000; 2001) who claim that education which focuses on the local, known and every day is not education, for at the heart of the educational endeavour is a leading away from the known, familiar and every day into universal processes.

According to Odora Hoppers (2005, p. 2):

> Traditional knowledge is thus the totality of all knowledges and practices, whether explicit or implicit, used in the management of socio-economic, spiritual and ecological facets of life. In that sense, many aspects of it can be contrasted with 'cosmopolitan knowledge' that is culturally anchored in Western cosmology, scientific discoveries, economic preferences and philosophies.

Pence and Schafer (2006, p. 2) assert “indigenous knowledge is integrated in culturally- mediated world views and tends to be holistic”. This perspective suggests that IK guarantees a stronger base for learning in ECD as ECD approaches should be culturally and contextually appropriate (see section 2.7, ECD approaches). This view of the positioning of IK is supported by the World Bank (1997) which states that the basic component of any country’s knowledge system is its indigenous knowledge.

As the discussion on IK has shown, IK is closely related to children`s culture and worldview. And it is this culture that should inform ECD practices. Western ECD approaches also acknowledge the importance of culturally relevant practices (see 2.7). Thus western ECD practices do not necessarily sit in opposition to IK. The two can and should co-exist in ECD. However, just as the Zimbabwean education system has formalised ECD so has many western education systems (Anning, Moyles, 2014). Despite the ongoing call in many Western countries for less formal and more play-based pedagogical approaches to ECD this call has sadly not necessarily been heeded. Children are being increasingly subjected to more formalised ECD approaches (Wood, 2016; Dahlberg, Moss and Pence, 2013).

ECD in Zimbabwe however, seems to be taking a double knock; one from the increasing formalisation of ECD programmes which stems from their colonial past and the other from the difficulty in incorporating IK practices into the ECD curriculum, which is partly caused by current education policies (see Section 2.9). At some point in higher levels of learning, IK might be regarded as knowledge that cannot stand alone and needs to be strengthened by other knowledge forms but within the ECD settings it is critical for children to learn in a culturally and contextually relevant setting (Klein and Chen, 2001). Hence, the importance of exploring how IK can successfully inform ECD practices.

To sum up, IK can be summarised using a 10 point description. IK has the following characteristics: These include that it:

1. Is local or specific to a particular geography or micro-environment or ecosystem and the people living there
2. Is orally transmitted.

3. Is the outcome of informal experiments, intimate understanding of nature, and accumulation of generation-wise intellectual reasoning of day-to- day life experiences as well as generation- wise intellectual reasoning tested on religious beliefs for survival.
4. Originated through interactions and not at an individual level
5. Is empirical rather than theoretical or abstract scientific knowledge.
6. Is functional or dynamic and hence constantly changing, discovered, lost and rediscovered in a new form (open ended IK).
7. Is culturally embedded (close- ended) where separating the technical from the non- technical and the rational from the non- rational is problematic.
8. Is repeated with time (because IK is both cultural and dynamic).
9. Is segmented in social clusters or asymmetrically distributed within a population, by gender and age.
10. Is shared by many (Ellen and Harris, 1996).

Thus, IK should be viewed as a compromise of many knowledge sources provided by different cultures. Within the ECD context therefore, I would argue that IK should not be considered as the only form of knowledge but that it should be acknowledged, its attributes recognised and given an important place in the ECD curriculum, especially as IK knowledge is frequently transmitted through games, song and story which are highly valued pedagogical practices in ECD. IK is important in ECD for it allows for the smooth transition from home to school (Nyota and Mapara, 2008).

2.4 Studies on the Incorporation of IK

Various studies have been carried in many countries on the incorporation of IK in the education system. These have mostly been studies in ECD where play pedagogies have taken centre stage. The incorporation of IK into ECD has received much attention in countries such as Canada, Australia, Ghana, Nigeria, Kenya and Botswana. I briefly described two studies which have been focused on ECD and primary school respectively.

2.4.1 Ghana

A study on the imparting of IK through traditional forms of entertainment and the role of Ewe (a tribe in Ghana) play games was carried out by Amlor (2016). He had observed that western knowledge forms were fast competing with IK and that there was a danger of IK becoming extinct. The study re-awakens the Ewe society to go back to their play games and also to incorporate them into their teaching. The study further identifies some popular Ewe play; singing games and describe activities contained in these games in terms of forms, participation, equipment rules or codes of play, as well as socio-cultural settings. The justification for the games is that they go a long way to teach, give children an in-depth understanding of their environment and also measure their creative aesthetic values which are culture specific.

Another study was carried out by Abdulai (2016) entitled “Pedagogy of Indigenous Play: the case of Ghana`s early childhood education”. This study elicits perspectives of early childhood educators in a post-Diploma degree programme on indigenous play in Ghana. Participants revealed how different plays, songs and rhythms are practiced and their relevance to early learning. The study further reveals, however, that most of the plays and songs were not used in early childhood education teaching and learning. The study recommends that the indigenous plays were of educational relevance and thus needed to be documented as well as included in the early childhood curriculum.

2.4.2 Botswana

Bose and Seetso (2016) carried a study to establish teachers’ mathematical knowledge and their ability to use games to teach mathematics. The study established that primary school teachers had good mathematical knowledge. However, they lacked knowledge and the ability to use local games as pedagogical strategies. The end result of this study was production of a teachers` resource book comprising indigenous games and rhymes. The resource book provide teachers with a means of including IK practices as part of their teaching content and pedagogies which enabled better understanding of concepts by the children.

2.5 An Overview of Education in Zimbabwe – Exploring the Place of IK

Formal schooling in the Western sense is a phenomenon that was introduced to many indigenous peoples at about the same time that their territories were colonised by Western powers around 1890s. Before then, education in traditional African societies was meant to equip young people for their gender-specific roles in society (Adeyemi & Adeyinka, 2003). In Rhodesia (colonial Zimbabwe), modern schooling among Indigenous populations came about largely through Christian missionaries. Christie (1991) states that although education by the missionaries was largely seen as intended for good, critics have pointed out how mission education subtly suppressed the people's mental capacities through its displacement of local ways of knowing and living, as well as local forms of education. The former Rhodesian government took over the education of the Black population in the early 1900s and created the infamous black education which was meant to prepare Blacks for subordinate roles. Therefore, neither mission education nor Black education recognised the knowledge of Indigenous peoples. Both the missionary and the English system of education failed to recognise the knowledge of the Indigenous people by providing content which was very western. It also condemned some knowledge as evil and unscientific, for example, the beliefs and taboos about child rearing practices.

When Zimbabwe became independent in 1980, education became a major target for reform both in structure and content, in order to rid the curriculum of colonial content and methodology. Reforms were aimed at supporting social justice. The result was a new system of mass education. However, the reforms until 2005 unfortunately paid lip service to ECD (Ministry of Education, Sports, Arts and Culture, 2004). An important change in the new curriculum included the recognition and valuing of Indigenous Knowledge as one of the principles of the curriculum, as well as a shift in focus from western knowledge to IK. As a way of recognising IK, the curriculum has adopted the philosophy of "*unhuism*" (personhood) (Competency based curriculum Framework, 2015- 2022). The inclusion of IK as curriculum content shifted the focus to a more learner centred curriculum.

When interpreted from a social constructivist perspective (see chapter 3 for a detailed outline of this theory), a learner-centred curriculum involves recognition of the role played by learners' sociocultural contexts in shaping the knowledge and worldviews that they bring into the classroom (Vygotsky, 1978; Wertsch, 1985). In exploring the implications of learner-centredness in the classroom, Malcolm and Keane (2001) identify three levels through which teachers can show learner-centredness. These are in order of complexity;

- caring for students
- learner centred pedagogy
- learner-centred outcomes

Malcolm and Keane (2001) place the three forms of learner-centredness along a continuum where lower levels are subsumed by the higher levels. For them, the ideal learner-centred classroom reaches into the third level, where learners are allowed space to see how their thinking is shaped by their experiences, their histories, social structures and cultures. Teaching that strives for the third level of learner-centredness is likely to find it easier to value indigenous knowledge in the classroom. Putting these ideals into practice might be easy, especially with regards to IK and ECD integration. As the pedagogies lead to child centeredness the children are able to interact within their cultures and incorporation of IK becomes possible.

2.5.1 Positioning Early Childhood Development

Early Childhood Development refers to a phase of development between birth and eight years (see chapter 1); which is the period to meet the developmental needs of children between the ages from birth to 8 years old (Morrison, 2008). In Zimbabwe, as previously mentioned, the ECD programme is divided into three phases namely the infant- toddler (birth-3years), the preschool/ ECD class "A" and "B" (3-5 years) with the latter being the senior class and the infant grades 1-3 (6-8 years) (MoESAC, 2005).

The Zimbabwe ECD rollout is guided by various policy documents as briefly touched on in chapter 1. In this study, I will examine the Education Act (1987, and 2006), SI

106 and the ECD syllabus. The Ministry of Education ECD syllabus (2012, p. 10) asserts that the,

> Early childhood development programme focuses on the total development of the child. Teachers are free to adapt the activities to suit the age group, developmental level of children and the context.

The excerpt recognises the importance of the learning context which is a fertile ground for using IK to make learning more relevant and avoid dissonance between what is learnt in school and everyday life (Klein and Chen, 2001). Yet, other documents like the Education Act (1987) acknowledge that despite the increasing interest in the provision of Early Childhood Development known as Early Education and Care (ECEC) that before the turn of the new millennium there have only been skeleton regulations, mainly focusing on conditions necessary to run for an ECEC centre.

According to the report of the Presidential Inquiry into Education and Training (1999 p.264),

> Since 1980 there has been great interest in expanding the provision of Early Childhood Education and Care (ECEC), but policies and strategies relating to access, provision and providers have been limited. There have been skeleton regulations, mainly focusing on conditions for an ECEC centre.

More recently, however, there has been some shift in the thinking. This has focussed on the importance of learning through the mother tongue which as previously noted is a strong vehicle through which to transmit IK. The Ministry of Education (2005) in Statutory Instrument 106 asserts that ECD children should be taught using the language best understood by the learners. According to the Education Act (1987) section 55(1):

> Subject to the provisions of this section, the three main languages of Zimbabwe, namely, Shona, Ndebele and English, shall be taught in all primary schools from the first grade as follows-
>
> a) Shona and English in all areas where the mother tongue of the majority of the residents is Shona;
> 2) Prior to the fourth grade, either of the languages referred to in paragraph (a) or (b) of subsection (1) may be used as the medium of

> instruction, depending upon which language is more commonly spoken and better understood by the pupils.

From the policies above, it is clear that the language of instruction for ECD class A and B is not stipulated in the education policies, but by implication, based on the ruling for the formal grades it should be the mother language (Education Act, 1987). Mother language is a critical vehicle through which IK can be passed on to the ECD children through games, song and stories which are recognised today as playful pedagogical strategies. Thus play as an ECD pedagogy is a central vehicle through which IK can be passed to children. Generally, as children play, they do so in a cultural context. This confirms the recapitulation theory of play which suggests that as children play, they reproduce what has been done or played in their culture before. Thus, it is imperative to have a closer look at the views on ECD as it has an influence on IK understanding and incorporation. Yet despite the recommendation that local knowledge and practices should inform ECD practices, Schafer et al. (2004, p. 62) maintain that "interventions and programmes in ECD tend to be based on an accepted body of knowledge built on Western experience and practice."

2.6 A World View of ECD: Its Impact on Early Education in Zimbabwe

ECD, especially from a Western perspective, has been influenced by works of various theorists that are to be unpacked in this section. Prominent theorists include Froebel, the Macmillan sisters, Robert Owen, Susan Isaacs, and Piaget. Their theories are examined in terms of how their approaches have informed ECD practices as well as how these theories can enhance or inhibit the incorporation of IK into ECD teachers` pedagogical practices. It is imperative to unpack the contributions made by the theories because they have influenced and continue to influence both the ECD curriculum and the pedagogy.

2.6.1 Froebel (1782- 1882)

Froebel was influenced by Comenius' (1592 –1670) theory which is based on the idea that education is considered as a universal birth right for everybody and as such is a powerful tool for achieving one's potentialities. According to Crain (2005), Comenius is remembered today because of the great importance he attached to education as a universal birth right for everybody as espoused today in the United Nations Convention on the Rights of the Child (UNCRC) (1989) as well as the African Charter on The Rights of the Child (1990). According to Comenius, for learning to take place three elements must be integrated. These are the capabilities of the learner, the content of the curriculum and the teacher and the teaching methods (Follari, 2011).

Froebel influenced the English preschool movement which influenced the Zimbabwe ECD movement. His theory influenced in the area of curriculum, instruction development and methodology. The idea of a child centred curriculum in ECD originated from his concept of 'gifts' and 'occupations', songs he composed and games (Morrison, 2008). The 'gifts' given by Froebel to children resembles the materials needed for learning in ECD and the occupations are equated to the activities or tasks the children perform using the given materials. From Froebel`s value of play comes the development of the play-way method as the best method in ECD which is widely used in Zimbabwe. Froebel also views play as something that comes naturally to the child and as the most fruitful way for children to learn. He advances that play gives joy, freedom and inner activity of the child.

Another principle of Froebel is the value of symbolic behaviour through play. Symbolic behaviour in ECD is espoused in pretend play where children understand that they can make one thing stand for or symbolise something else. For example, a leaf can stand for a plate and a stick for a knife in their play (Bruce and Meggitt, 2005). Froebel suggests that children were able to learn at their highest level through imaginative or pretend play.

Froebel also brought the idea of the Kindergarten (children`s garden) and this resulted in him being christened the Father of the Kindergarten. He opened a school in 1840 and put his educational ideas into practise (Tassoni & Beith, 2005, p. 71). The idea of a teacher as a designer of experiences and activities emanated from Froebel`s theory when he likened a teacher to a farmer who nourishes, cultivates and waters the seedlings in the garden. He likened a child to a seed, full of great potentialities that can be realised, stunted or thwarted depending on activities provided by the teacher. This is seen when Froebel compared children`s learning to the idea of unfolding held by Comenius. Froebel sees children as having inner potential and capacity to unfold. The teachers` role is to observe this natural unfolding and provide activities that enhance learning in children so that they develop their inborn qualities (Morrison, 2008). Thus, this naturel unfolding can be realised through the use of IK since learning will not occur in a contrived situation.

The idea of the subject based approach in ECD also came from Froebel (see table 5.4- the ECD timetable). Froebel emphasised the teaching of Expressive Arts, Mathematics, Literature, the Natural Sciences, creativity and aesthetic things (Morrison, 2008). Through learning expressive arts for example children can be encouraged to draw, make collage and model with clay. This develops the children across domains such as physical, mental, social and emotional. From the discussion above, one can conclude that the ideas from Froebel have influenced the ECD programme in Zimbabwe.

2.6.2 Robert Owen (1771- 1858)

Robert Owen started the British Infant School which was one of the forerunners of the nursery school movement in in England**.** In 1816, he introduced the first nursery school in the United Kingdom at New Lanark in Scotland. Children between the ages 1 and 6 were cared for while their parents and other siblings worked in the cotton mills. He suggests that a strong educational foundation will produce better results later.

Owen advocated for free and unstructured play in the education of young children and did not press for formal training (Kwon, 2002). His idea of free and unstructured play could have also influenced Isaacs` thinking on the same. His school was run on a play principle, no child being forced in anyway. However, Owen felt toys were not necessary as children, when as many as thirty or fifty, when left alone will amuse each other. This principle could have influenced high teacher-pupil ratios of about 40-50 children in ECD class though the practice is not consistent with policy which stipulates it as 1: 20 (MoESAC, 2005).

In addition, Owen`s classrooms were furnished with paintings, mainly of animals and often had natural or real objects from gardens, fields and woods which always excited children`s curiosity and created an animated conversation between the children and their teachers (Kwon, 2002). This meant that the classroom set up should exhibit a culturally relevant learning environment. He also advocated for models and visual materials for all age groups. This idea has seen the creation of play areas in the ECD classrooms.

Another of Owen`s idea is having the right teachers in the ECD centres who are not bookish. This led him to have two adults who were not learned to be teachers in his school. These teachers were to operate under his close watch and they needed to have unlimited love for children. He regarded teachers as play fellows and they were supposed to make children always happy by being kind and loving to them. Owen also suggests that older children can care for and assist the younger ones. This resonates well with the principle of collaborative learning (Rogoff, 2003).

2.6.3 Margret (1860 – 1931) and Rachel MacMillan (1859- 1917)

The MacMillan theory is based on the idea that first-hand experience and active learning through free play with access to a wide variety of materials supports children's learning (Tassoni and Hucker, 2005). They also placed value on good health in terms of diet, housing and physical hygiene as essential to effective learning. These aspects remain important issues today, even in the more traditional society. They also encouraged physical exercise manual dexterity and they emphasised the importance of children playing outdoors (Bruce et al, 2010).

To promote these practices they established the open-aired nursery school which is a precursor to the current outdoor play area in ECD (Crain, 2000). All the above, I suggest, resonates closely with indigenous child rearing practices. They also highlighted the importance of building good relationships with both children and their parents and advocated for close partnerships with parents. Thus, to achieve these outputs they placed enormous importance on training of staff.

MacMillan's theory has had an influence on ECD practices. For instance, the view that the development of the whole child is enhanced through play is still a strong ECD underpinning principle. It is widely acknowledged that through play children make sense of their world and to apply what they know. Tassoni and Beith, (2002) agree that for the MacMillan sisters the best opportunities for achievement lie in the domain of free play, with access to various material. This allows for incidental learning taking place a notion which is synonymous with IK. Their belief that first-hand experience and active learning are of paramount importance is seen in ECD when children explore in their environment manipulating different materials.

The idea of children exploring the natural environment is one that underpins many cultural practices and as such is no different from the views on play in the traditional Zimbabwean society. In traditional Zimbabwean society there were few restrictions in the form of physical boundaries. Children went into the natural environments comprising, for example, bushes and grass playing and learning at the same time with adults.

Like other early educationists such as Froebel, the MacMillan sisters encouraged parental involvement in their children's early learning. They believed in the importance of parental involvement and close partnership with parents to support the children's early learning (Morisson, 2008).

2.6.4 Susan Isaacs` (1885 - 1948)

Isaacs' theory was influenced by many of the early childhood educationists who believed in the importance of learning through doing. Like the MacMillan sisters, Isaacs' theory placed high value on play, movement in learning, parental involvement. In addition she placed great importance of observing children. Isaacs valued play because she believed that it gave children freedom to think, feel and relate to others (Bruce and Meggit, 2005). Her ideas on play have been described as free- flow play (Gordon and Browne, 1993).

This kind of play is open and uninterrupted (Greishaber and McArdle, 2010). That is, through their play children can move in and out of reality and begin to get a balance on their ideas, feeling and relationship. In ECD, this is seen when children learn through play giving them opportunity to learn social skills and to understand through play about the world in which they live. This in turn will allow them to move from reality into fantasy (Tassoni and Hucker, 2005).

In support of Isaacs's idea, children need space to move when learning through play instead of being stuck behind desks all the time (Bruce, 2001). These understandings of play are still strongly supported by current early childhood educationists (Bruce, 2016, Moyles, 2016; Gordon and Browne, 2017)). However, they are being challenged by modern education system where there is an ever increasing emphasis on a more formal approach to early learning and teaching (Gordon and Browne, 2017; Wood, 2009; Dahlberg, Moss and Pence, 2013).

Instead of ECD teachers allowing learning to happen through encouraging children to move freely and make choices during play children are seemingly spending lengthy spells in classrooms where they sit on chairs and working tables or desks while learning. On the one hand, the Zimbabwe curriculum has adopted the notion of indoor and outdoor free play but on the other hand children in ECD classrooms are expected to sit at desks for a lengthy period of time.

2.6.5 Piaget (1896 - 1980)

Piaget was a major contributor to understanding of how children learn and develop cognitive competencies. His theory of cognitive development has been extremely influential in modern ECD approaches. His theory is based on the idea that children play an active role in developing their own knowledge, so that they can understand the world around them (Tassoni and Hucker, 2005). In support Seefeldt and Barbour (1986) cite that children create their own knowledge as they interact with their social and physical environment.

In ECD, the idea of children creating their own knowledge is seen when children explore the indoor and outdoor play areas, for example, when children exhibit symbolic behaviour through pretend play. Through play children gradually begin to understand that they can make one thing stand for or symbolise something else. For example, a leaf can become a plate and a stick for a knife in their play (Bruce and Meggitt, 2005).

Piaget also believed that play was an essential vehicle to promote the young children's thinking. He defines that play as assimilation in which reality is assimilated to the child's existing scheme or view of the world and later accommodates it, (Tassoni and Beith 2002). Play as assimilation means that children can try out a variety of roles and use play materials to represent real life objects and images such as building a tower to the moon. In ECD, accommodation occurs when children become selective and refines what he/she knows.

Piaget is also of the view that children use first-hand experiences and prior experiences in order to learn, (Bruce and Meggit 2005). Experience constitutes the raw materials which children use to develop mental structures. In ECD, this is seen when children are involved in play activities where they apply skills or knowledge already learnt to solve problems. For example, a child who already knows that in order to build a tower which stands well, one has to assembly blocks which fit well to avoid the tower from falling. When that child tries to build towers he/she will use that prior experience.

As already mentioned, Piaget studied children's intellectual development. One of Piaget's aims was to explore children's reasoning processes underlying their right, but especially their wrong answers (Morrison, 2001). Based on this exploration of children's reasoning abilities ECD teachers should make use of questions or questioning techniques and procedures to promote or provoke thinking. As teachers understand how children think, they can use such knowledge as an opportunity to create strategies to incorporate IK into their pedagogical practices. Though today there is criticism of Piaget's work especially in relation to the age/stage aspects of his theory (Donald, Lazarus and Lolwana, 2007). However, his work is still extremely valued in guiding ECD practices as it is seen as a breakthrough in the way we understand how children think and learn.

2.6.6 Some closing thoughts on the history of ECD and their impact on early childhood education in Zimbabwe

This brief overview of some of the historical influences on ECD has been presented in order to illustrate that throughout the ages good early learning practices have always been viewed as being interactive, experiential and stemming from the needs and interests of young children. Today, as I argue in the next section, these ideas are still credible. This understanding of ECD practice is one that could readily accommodate children's cultural heritage. The early childhood curriculum and pedagogical practices could be richly informed by children's local, traditional knowledge and practices. Thus there are sound pedagogical reasons for including IK in the early childhood curriculum.

Yet, despite this acceptance of a child-centred curriculum based on the child's life world there appears to be a strong resistance to implementing such a curriculum. Despite policy documents espousing the value of experiential, play-based learning (DBE, 2011, 2015; MoESAC, 2005, 2012) the reality is the introduction of more formalised ECD programmes. This creeping formalisation has been noted in many countries (Wood, 2009; Gordon and Browne, 2017; Dahlberg et al., 2013).
Zimbabwe appears to be in a double bind situation. On the one hand the ECD programme has been strongly influenced by the previous colonial power, England. The ECD approach has, therefore, initially been informed by the thinking of early educationists such as Froebel, MacMillan and Isaacs (see section 2.6). But even in western countries despite the ongoing call for less formalisation in ECD nursery education, it is becoming increasingly prescriptive.

The same processes are happening in Zimbabwe; despite the recognition of a more informal approach to ECD, ECD practices are seemingly relatively prescriptive. This in turn has influenced choice of content as well as pedagogical practices. As such, even though policy acknowledges the importance of IK in the curriculum, IK has been marginalised to meet other perceived more 'important curricular outcomes related to subject discipline knowledge (See Figure 5.4 of the ECD timetable).

2.7 Quality ECD Practice

In this section, I present a short overview of what in today's understandings constitutes a quality ECD programme. I examine different ECD curricular approaches and explore some accepted ECD pedagogical practices.

2.7.1 The ECD Curriculum

The ECD curriculum has been influenced mostly by ideas of English theorists such as Froebel, Robert Owen, MacMillan sisters, Susan Isaacs, and Piaget. These theorists have their influence on the view for children, teaching methods, selection of content, and provision of play materials. This may be because Zimbabwe is an English colony. As noted earlier in section 1.9.4, it is important to further unpack the ECD curriculum. Curriculum is the term that is frequently used to refer to the content of teaching and learning activities (Shizha, 2014, p. 114).

It is generally explained as the content, learning experiences and behavioural objectives. Bernstein (1973, p. 85 cited in Emagwaeli and Dei 2014, p. 114) defines curriculum as "what counts as valid knowledge." However, these definitions are controversial and have sparked intense debates on how to define and validate knowledge (Shizha, 2014). They also do not cover the all-embracing understanding of what makes a worthy curriculum in the ECD context.

According to NAEYC/NAECS/SDE (1991 p. 21) a curriculum for early childhood can be defined as,

> An organized framework that delineates the content children are to learn, the process through which children achieve the identified curricular goals, what teachers do to help children reach these goals, and the context in which teaching and learning occur.

This definition does not appear to have changed much over the intervening years. Gordon and Browne (2008) still quote the above definition in their writings on the ECD curriculum. However, they include the social and cultural context and a consideration of how different contexts and cultures impact learning.

In other words, an understanding of curriculum continues to include everything that happens in the learning day. In this understanding of curriculum ECD, teachers have to consider the 3Cs (see Figure 1.2) as well as their pedagogical practices. Emphasis is still on play based approaches to teaching and learning in the ECD context. However, teachers are being required to interrogate their pedagogical practices more critically. This shift has been promoted by proponents of socio-cultural theory which forms the theoretical underpinning to this study. Play-based pedagogies are discussed in detail in chapter three.

In this section, I discuss various ECD curricular approaches. These approaches include the thematic approach, the 'emergent' curriculum, developmentally appropriate practices (DAP) and a subject-based curricular approach. I have chosen these four approaches because they all have some relevance to the Zimbabwean situation; either because they currently shape the curriculum approach or because they could be a useful way in which to consider the incorporation of IK into the ECD curriculum. These approaches will also be examined in terms of how much they influence (or not) the incorporation of IK in ECD practices in general and specifically in ECD pedagogical practices.

2.7.1.1 Thematic approach

A thematic approach is one of the teaching strategies that integrate two or more curricular areas as a way of planning and delivering the curriculum (Brogdon, 2010). Different terms are used interchangeably to describe a thematic approach to curriculum design and delivery. These terms include `cross curricular`, `integrated` or `interdisciplinary` curriculum.

The thematic approach is also directly associated with constructivist ideas since it provides an environment where knowledge can be individually and socially constructed (Freeman and Sokoloff, 1995). This approach allows learning to be more natural and less fragmented than when the school day is divided into different subject areas with seemingly unrelated content units. When this happens, children`s experiences are decontextualised and they are not able to meaningfully relate to and with their learning experiences.

A thematic approach in ECD refers to a teaching approach where selection of content and many of the activities is based on a predetermined theme or topic. Ideally, the theme should be chosen according to the children's interests and learning needs. When this happens, learning becomes meaningful and enjoyable for children. This approach to selecting themes considers the inclusion of IK as well as the children's cultural and contextual realities.

However, sometimes the theme is arbitrarily chosen by the teacher and has little or no connection to the children's life experiences. Such themes could include, for instance, different countries of the world. Sometimes even if the theme is based on a topic known and of interest to children for example trees the teacher only discusses trees that are found in Europe. Indigenous trees are excluded from the explorations. Thus, it cannot be assumed that a thematic approach automatically promotes IK.

2.7.1.2 Emergent curriculum

The emergent curriculum is a philosophy of teaching and way of planning curriculum with a specific focus on children`s needs and interests. It is a way of a flexible and open- ended way of planning a curriculum that respond to children`s needs and interest so as to make meaningful learning (Munday, 2016). This responsive teaching approach enables teachers to create contextually relevant and meaningful learning opportunities for children. The notion of an emergent curriculum is not new; it was promoted by educationists such as Macmillan sisters and Isaacs (see Section 2.6) to mention but two. However, the growth of the Reggio Emilio programme has seen a resurgence of interest in the emergent curriculum. Malaguzzi the father of the Reggio Emilio programme says,

> What children learn does not follow as an automatic result from what is taught, rather, it is in large part due to the children`s own doing, as a consequence of their activities and our resources (cited in Biermeier 2015, p. 1).

From the above statement, it can be inferred that children should to be actively involved interacting with both human beings and materials for their learning to be meaningful. Such an approach recognises the importance of incorporating IK. Cultural tools are some of the first thinks children interact with to enable them to make meaning of their world. Thus, as children engage with their culture and cultural tools, their learning does not need to be highly structure; it flows naturally and is shaped by the children themselves. The choice of content and activities is driven by the children's needs and interests.

Though this type of curriculum offers rich learning experiences for children and is advocated by many early learning specialists two questions need to be asked in relation to the Zimbabwean education context. However, with the subject based approach adopted in the Zimbabwean ECD, little room has been left for the emergent curriculum since the timetable is packed (see Table 5.4 for the ECD timetable). The syllabus used also promotes learning to be formalised through the use of the subject based approach and standardisation of activities without taking cognisance of children`s backgrounds (MoESAC, 2012). A simple answer to these questions is because the ECD curriculum is aligned to higher phases such as the junior primary school (Grades 1-7) it becomes difficult to consider such a flexible curriculum approach.

2.7.1.3 Developmentally appropriate practices

Developmentally Appropriate Practices (DAP) is a very critical ingredient in the teaching and learning of children at ECD. DAP is a way of teaching in ECD that meets young children where they are which means teachers need to know the children well and enable them to achieve the goal (NAEYC, 2010). DAP is more about doing things better – not "right" or "wrong". DAP emphasises three kinds of important knowledge for ECD teachers namely, knowing what is age appropriate, knowing what is appropriate for each individual child and knowing what is culturally appropriate (Bredekamp and Copple, 1997). Inclusion of cultural appropriateness in DAP opens the opportunities for ECD teachers to embrace IK into their curriculum and pedagogical practices. DAP can be represented diagrammatically as seen in Figure 2.1.

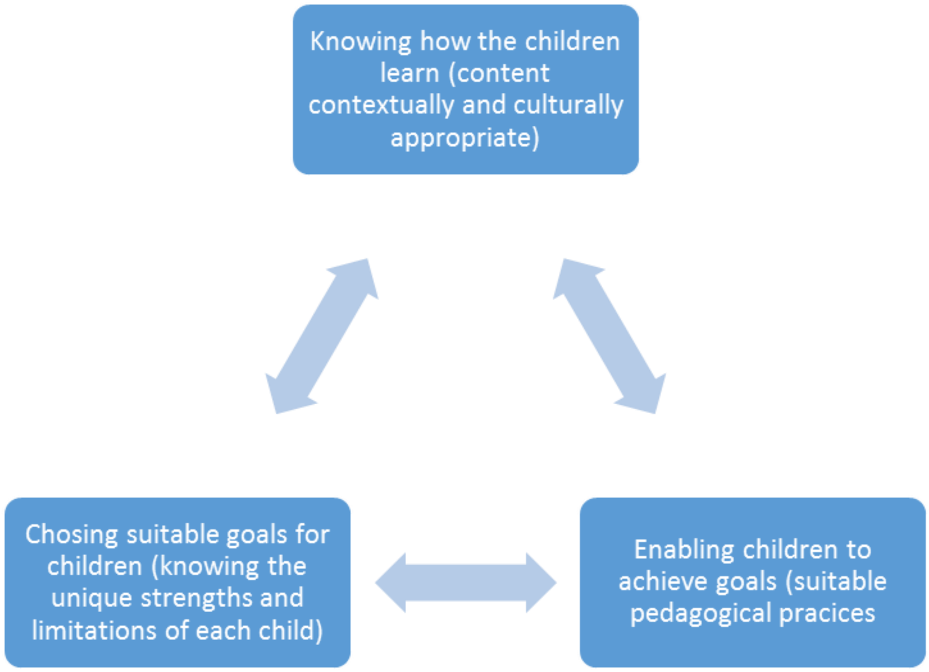

Figure 2.1: A model of culturally adaptive DAP

Figure 2.1 above shows the three pillars of ECD teaching namely

a) enabling children to achieve goals and experiences.
b) knowing how children learn and,
c) suiting goals for children.

This model aligns well with that of Bruce's description of the 3 Cs of the emergent curriculum (see Figure 1.2). Each aspect is briefly discussed below.

Knowing how the children learn

Knowing the characteristics of the children and how they learn is critical to successful ECD teaching. Teachers must get to know children well. All teaching practices must be age appropriate, teachers should be attuned to the children as unique individuals and be responsive to social and cultural contexts (NAEYC, 2010). Thus, DAP is not limited to the physical and psychological dimensions of development but also the social and contextual dimensions which makes it a fertile ground for incorporation of IK into the ECD teachers pedagogical practices.

The social and contextual dimension includes the child`s family, peers and the community from which IK can be drawn. An example is when children play traditional games they are familiar with; the play experience becomes enjoyable. As mentioned previously these ideas can be equated to the principles of content, context and pedagogy in Bruce`s (2005) 3Cs of the ECD curriculum (see Section 1.9.5).

Choosing suitable goals for children

For any learning experience to be successful, ECD teachers should align their learning goals with the needs and capabilities/ competencies of children. The goals that are set should not be alien to the demands of the society in which the children live (Bredekamp and Copple, 1997). As Maynard (2002) affirms, meaningful learning is that which is culturally bounded. Thus, DAP sets the stages for the incorporation of IK in ECD as ECD is the bridge between home and the later complex schooling for the child.

Enabling children to achieve goals

One of the chief outcomes of developmentally appropriate practice is to enable children to achieve the desired developmental goals (Bredekamp and Copple, 1997). ECD teachers should assist children achieve goals that are both challenging and achievable (NAEYC, 2010). Children can be assisted to achieve desired goals through ‘scaffolding’ by a more knowledgeable other (Vygotsky, 1978) In the ECD context, this could be an ECD teacher. The teachers’ incorporation of relevant IK can thus be a positive stepping stone to support young children`s learning and enable them to extend their meaning making through utilising the zone of proximal development (see chapter 3 for a more detailed discussion of this idea).

The three pillars of DAP are further explored in its expanded principles I have diagrammatically represented in Figure 2.2.

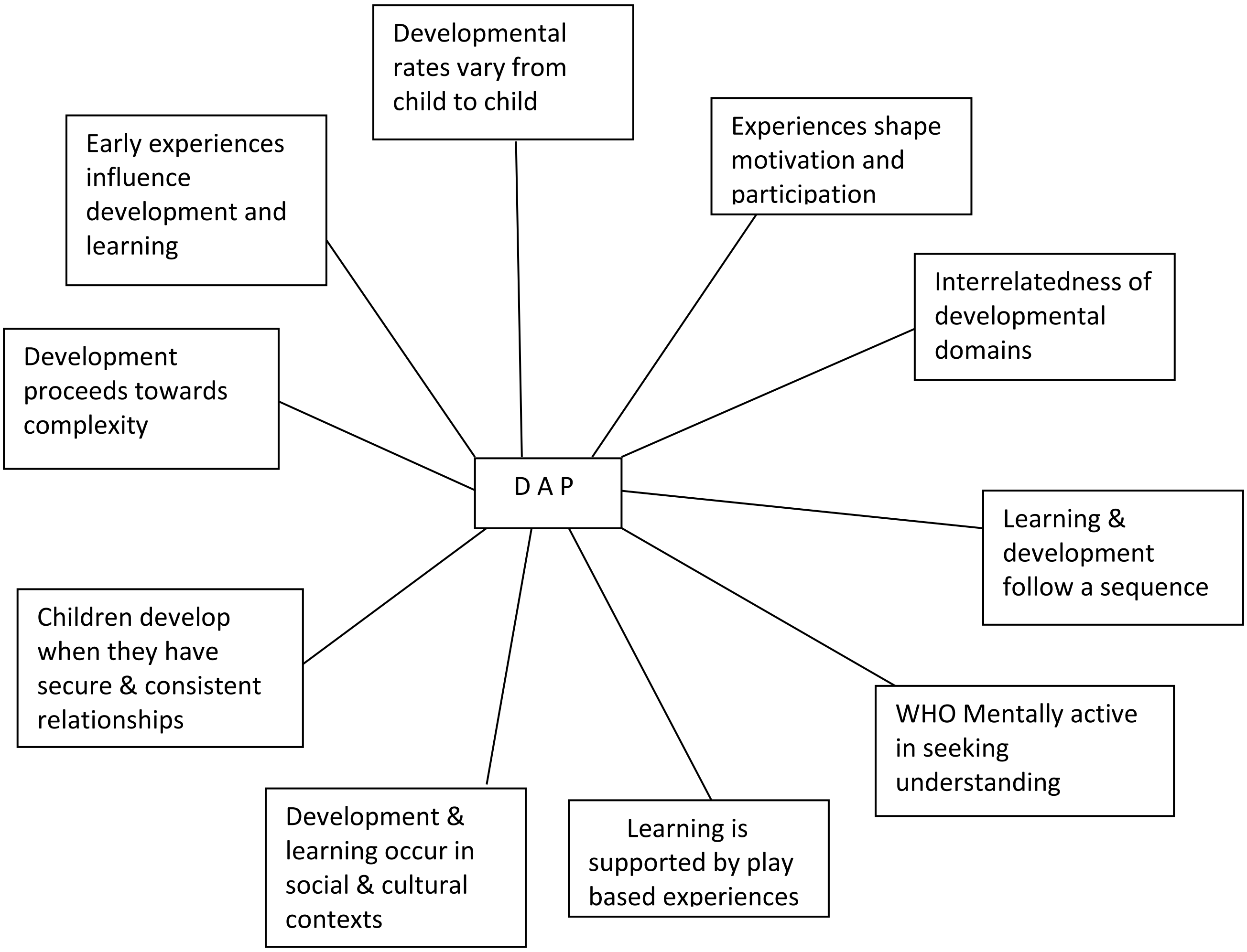

Figure 2.2: Principles of DAP

From the discussion above, it can be concluded that DAP is an approach that is hinged on three pillars which are: knowing how the children learn, choosing suitable goals and enabling children to achieve goals. The practice is culturally entrenched that it enhances the inclusion of IK in ECD.

2.7.1.4 Subject based approach

A subject-based approach refers to the compartmentalising of educational content into subject disciplines. It is generally not regarded as a suitable approach in ECD as it has been advanced that young children do not view things or knowledge in parts but as complete wholes (Minnet, 2010). Furthermore, the emphasis is a narrow one; it is on subject content knowledge which is in opposition to an approach that aims to develop the holistic child. Although it is not a desirable ECD approach, it is important to briefly discuss this approach because it is the one used in the Zimbabwean education system.

It is possible that this subject based approach could have been influenced by Hirst`s theory on the forms of subject knowledge, He sets out seven clear distinct forms of knowledge which resemble subjects in school, namely mathematics, physical science, human science, history, religion, literature, and fine arts and philosophy (Gribble, 2007). From these subjects, the education system could have drawn its subjects namely language Arts, Mathematics and Science, Social Sciences and Expressive Arts. However, these forms of knowledge are drawn from a Western perspective and do not recognised IK. The idea of segmenting knowledge into subjects at an ECD level has not been well received. As Barnhardt and Kawagely (2005, p.11) argue "…. and education tends to emphasize compartimentalized knowledge that is often decontextualized and taught in the detached setting of the classroom."

Compartmentalised-learning is thus not a good practice in ECD since the holistic nature of early learning and development as well as cultural relevance should be considered when educating young children. Hence, the use of an emergent curriculum or one adapted from DAP is regarded as better practice. Through these approaches the ECD teacher is able to seize and promote developmental opportunities among children (Morrison, 2008). These approaches are also closely aligned to ECD pedagogies and as argued in Section 1.9. It is difficult to separate the ECD curriculum and appropriate pedagogies. In the next section, I briefly unpack relevant ECD pedagogical practices.

2.7.2 Pedagogical practices in ECD

Good ECD pedagogy should include what is taught (content), how it is taught (methodologies), and of course a deep insight into the children's context and culture. These connections have already been highlighted in chapter 1 .9 where I included the 3Cs and extend the understanding of these to include methodologies. Pedagogy has therefore been discussed in chapter 1 but it is important to have a closer look at it because it is very critical to the incorporation of IK into ECD.

Stephen (2006, p. 28) asserts pedagogy refers “to the interactive process between teacher and [child] and the learning environment (which includes the concrete learning environment, the family and community).” According to the Ministry of Education ECD syllabus (2012), teachers are free to adapt the activities to suit the age group, developmental level of the children and the context creating a positive learning environment. Creation of a positive learning environment is pivotal if play based pedagogies are to be meaningfully implemented in the ECD programme. Because for quality ECD, teaching and learning to be realised a positive environment is needed. The characteristics of a positive environment are shown in the spider diagram labelled Figure 2.3.

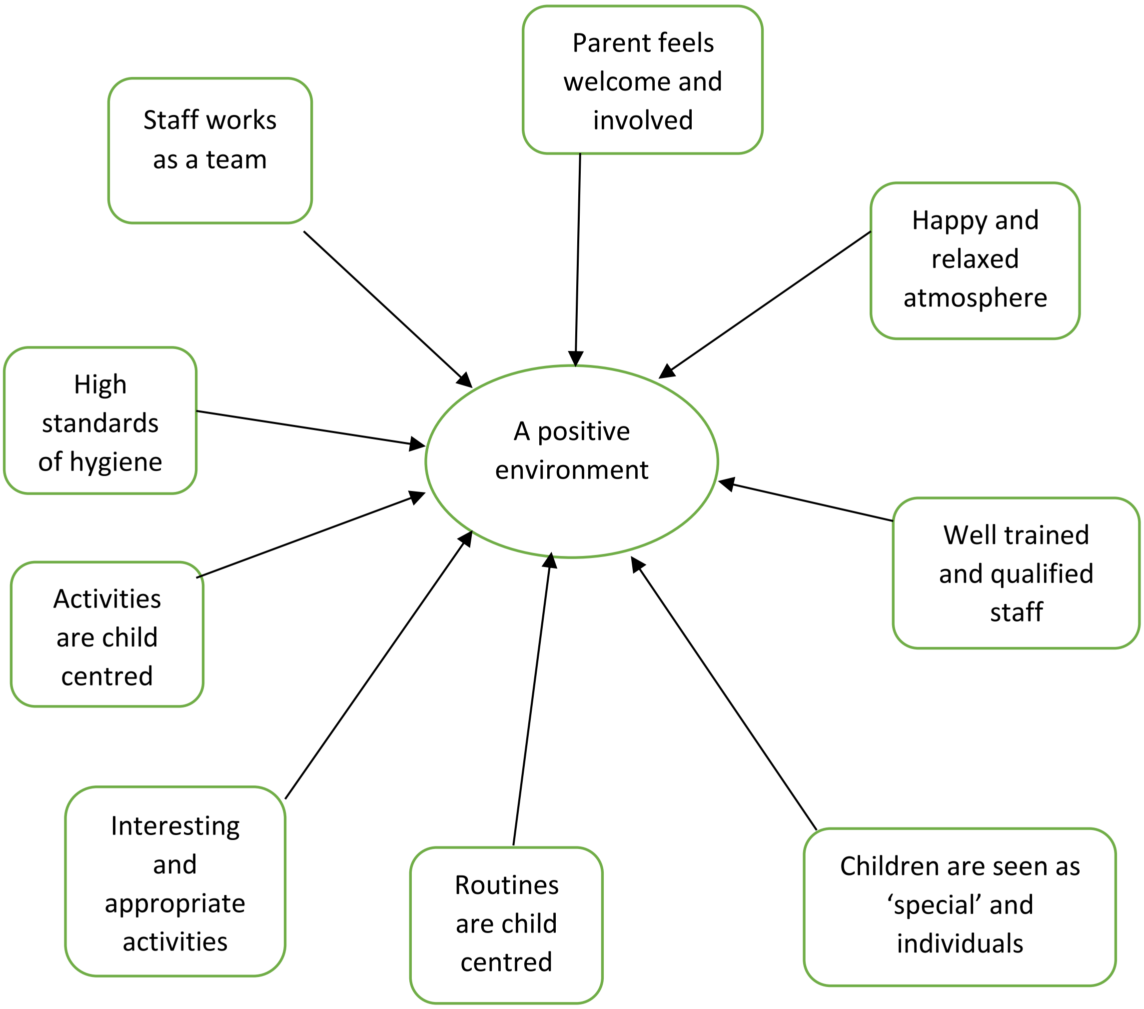

Figure 2.3: Characteristics of a positive ECD environment (Tassoni & Beith, 2005, p. 98)

An ideal ECD environment is all inclusive as shown in figure 2.3. An ECD environment should be as a safe, happy environment which sets out the basis of learning. In order to realise such an environment some of the characteristics that the ECD teacher should demonstrate include being loving, warm and knowledgeable. The teacher should create a responsive environment where children feel confident enough to interact with each other and to participate in all activities offered (Gordon and Browne, 2017). Such an environment would draw on IK to form the basis of the learning activities. Within n ECD context games and songs are well recognised ways of including IK in the learning day. Some traditional songs and games are set out in the next section.

2.8 Children’s Game and Songs as a Form of IK

Children`s games and songs provided a way of primary socialization. It is this socialization which makes it possible for children to adapt to their natural and social life. Berger (2008) says children`s games are more than games. Nyota and Mapara (2008) assert that Shona traditional children`s games and play songs provided an opportunity where children learnt through guided participation in social experiences and explorations of their world. Through games and songs they learnt a lot about adult roles, socially and economically, social skills like sharing, solving conflicts, practical skills like constructing a hut, preparing and preserving food among others.

All these essential life skills were learnt during childhood through playing traditional games but today, with the coming of Western knowledge systems, information communication technology and globalization children no longer seemingly have time for the traditional games and songs in school. The system appears to foreground western games and rhymes and traditional ones become marginalised. Nakashima, Prott and Bridgewater (2000) assert that formal education has disrupted the use of practical everyday life aspects of Indigenous knowledge and ways of learning. They go on to say that much Indigenous knowledge is being lost as people embrace Western knowledge systems as the way of knowing and learning (Ibid, 2000). For purposes of this study, only a few Shona traditional children`s games and songs are going to be discussed paying particular attention to what the children learn through these activities. All the games that are mentioned are ECD appropriate.

2.8.1 Cognitive games

Games were intended to sharpen children's intellect as well as prepare them to confront and solve real life problems (Mawere, 2000). In games like "*nhodo"* and "*tsoro"* (draughts) one needed to be a really fast thinker to be able to outdo others*. "Nhodo"* and "*tsoro"* can be equated to modern board games (Nyota and Mapara, 2008). They helped to promote critical thinking, co-ordination, and numeracy among other qualities. Games were performed in order to impart a certain knowledge strand in the children. For example, games with rules would resonate well with procedural knowledge where the child would be taught to follow certain steps in order to accomplish a task. The children would learn how to play the game and also what was expected of the "suitor" (someone pretending to get a wife) in for example games like "*sipoti sipoti"* (round and round), "*sarura wako"* (choose yourself a partner).

Children`s games also taught counting, for example, "*motsiro"* or "*kapotsa"* (one). These were competitive games to determine which child counted better/more than the others (Nyota and Mapara, 2008). These types of games are related to practical aspects of children's day to day living where they were expected to be able to count their livestock or any other items which required counting. Object or people naming was another important learning outcome related to children's play. They gave the names of trees, "*do do zengera uyo mutii"*? (Guess what tree is that?), *"du du muduri"* (guess what his name is?) (Mutema, 2013). Through these games children got to know one another, their environment and what could be found within their environment. Obtaining this knowledge (and concomitant skills) was done in an exciting and fun manner.

Mental challenges or quizzes were in the form of "*zvirabwe/zvirahwe"* (riddles). Folktales (*ngano)* and riddles (*zvirabwe*) were slotted in the evening to entertain both adults and children (Nyota and Mapara, 2008). In *"zvirabwe"*, a winner's self-esteem would be boosted. Song, dance and "*ngano"* (folktales) were also popular pastimes (Nyota and Mapara, 2008). All these games were taught in early childhood.

Children from ECD level and adults alike were also involved in singing as forms of entertainment. Singing and drumming were usually done in "*Jenaguru"* (spring moonlit nights) when the weather was conducive for the activities (Mutema, 2013). They could not be done during the day when people were engaged in work. It can be argued that there seemed to be sound time management in societies of yesteryear. Daytime in winter and springs was also given to entertainment when important farming activities did not need to take place.

Children also played house, "*mahumbwe",* where they imitated the adult roles of father, mother and children. Here they practised what they saw their elders do, looking for food, preparing and preserving it, resolving disputes and even worshipping. Masuku and Ndawi (2001) sum it all by saying that children's traditional games are a way of ensuring the continued existence of its customs, traditions and culture.

Other games and songs helped the children to learn about positive attributes, virtues and values like; hard working, smartness, obedience among others. For example, *kana "ndikadai"* (what if I do this), "*amai ndakanaka"* (mother I am beautiful). The games and songs were a platform for learning and a lot was learnt including natural resources management, seasons of the year, physical strength, perseverance and determination, conflict management, handling success and failure. This implies that the games and songs had a lot of bearing on children's worldview and attitude (Nyoni and Nyoni, 2013).

2.8.2 Physical games

Some other games played by the Shona children included, "*kusika nyimo", "mupare"*, swimming, "*mahumbwe"*, "*bvutu", "mutserendende"* (sliding), "chitsvambe", "*chamuvandevande"* (hide-and-seek) and "*zvirabwe"* (riddles) (Mutema, 2013, Gelfand, 1992). "*Mupare"* and "*bvutu"* (snatch) were among those classified as naughty games played by children as young as 5 years (Mutema, 2013; Mawere, 2000). As mentioned already many of the games were learnt by children through guided participation. By guided participation Rogoff (1990) explains that the children learnt the games by doing/ playing it, under the guidance of the adult. The way these games were taught, resonate well with the sociocultural principles of learning. Children were encouraged to achieve the task with the help of the more knowledgeable other (Vygotsky, 1978) (see chapter 3).

Some games and forms of entertainment could be played concurrently with various forms of productive activities. Herd boys could play "*tsoro"* and "*horikotyo"* while herding cattle. "*Nhanzva"* or "*mutserendende"*, (swimming), "*chitsvambe"* and some naughty games could also be played outdoors often in the *veld* (open fields) while tending livestock -mostly cattle (Masuku and Ndawi, 2001). This is in stark contrast to the modern day forms of entertainment such as indoor play and outdoor play activities that often take place in much more controlled environments. Nowadays, games and entertainment can involve one person with many virtual non-personal characters; thus killing the community spirit or spirit of belonging. Unlike in the traditional society where work and entertainment were done concurrently by children, nowadays, there is a temptation of putting off work to follow certain play programmes. However, this may not be much of a problem in the rural areas as children sometimes do both work and play. In addition, indigenous games were related to seasons unlike modern games that have no specific time or season. Thus, knowledge of season change was also reinforced through traditional games.

"Mupare" was a fight in which soft missiles like dry cow dung were used. Boys would run in the plain (*veld*) attacking and counter-attacking. Despite this not being permissible, naughty boys mighty use harder objects which might have been dangerous. "*Bvutu"* was a game whereby the one who was "on the receiving end" would have whatever he had in hand snatched away from him. This was meant to promote alertness in people who would be aware of the rules of the game. Some boys would always be on the lookout for their playmates who when they bent forward, would receive a heavy kick that was meted out as a penalty (Gelfand, 1992).

"Chitsvambe" was almost like "*bvutu"*. A child would run to touch another one to offload the burden of going to bed or their home *"carrying chitsvambe*" (Gelfand, 1992). A sense of a winner would accompany all the children in the game. The children would be spurred on to be alert and run, thus having bodily exercise.

Swimming (*kudhidha*) was done in natural pools in the river valleys. "*Mutserendende"* or "*nhanzva"* was done on steep portions of the open smooth rock hill side where children would slide down sitting on a piece of a tree known as "*nhanzva"*. Hide-and-seek was another challenge which promoted navigation of the child's surroundings and research or hunting. Children took turns to hide and seek. If those seeking fail to locate those hiding, they will be regarded as losers (Gelfand, 1992).

From the discussion on indigenous games and songs, it can be concluded that the children introduced to a variety of indigenous knowledge and could be immersed in rich learning opportunities through various indigenous pedagogies. It is also important to note that most games took place outside of the work schedule of the members of society. Children were involved in family work like gathering fruits, catching termites, picking mushrooms, watering vegetables, weeding and herding cattle among others. In other words, children were expected to make a meaningful contribution to the management and functioning of the household. Today, expecting children to do these types of tasks appears to be frowned upon. The modern view ascribes expecting children to help with some home chores as child labour (Nyandiya-Bundy, et al, 200). Household chores were seen as a form of apprenticeship to prepare children for a fruitful adult life. In addition, it can be argued that most of the traditional games are now losing popularity due to the prevalence of modern games and technology (Nyota and Mapara, 2008). Such loss in popularity of the games leads to loss of valuable knowledge for ECD children as they learn things that are divorced from their culture.

Traditional life as shaped by indigenous knowledge and indigenous knowledge practices, therefore, offered rich learning experiences to young children. Yet, as has been shown, it has been and continues to be replaced by western forms of knowledge. One of the reasons for this occurrence is possibly because IK has traditionally not been recorded. Non recording by users was not by means of using western systems as the societies were largely oral hence knowledge was 'recorded' through practice hence passed from one generation to the next. The old'' were the moving libraries (Sifuna and Sifuna, 2008, Nyandiya- Bundy, et al., 2000; Gelfand, 1992). It has survived as an oral tradition but modern ways of knowing and doing have marginalised the value of IK. In addition, a more formal approach to education, where focus is on subject discipline knowledge, cannot readily accommodate IK because IK and methodologies used to engage with IK are so closely intertwined (Dei, 2001).

Thus, the inclusion of IK in the ECD curriculum is problematic of two accounts. Firstly, despite research advocating for less formal, play based approaches to ECD, society appears to be pushing for a more formal approach to ECD (Wood, 2009). I argue that learning and teaching through play are poorly understood concepts. Secondly, western education systems advocate for more subject-based approaches. In such an approach, IK which in its implementation merges knowledge and pedagogy becomes marginalised.

Given its value in the learning and development of children within their cultural contexts as advocated by the sociocultural theory (World Bank, 2001) it becomes imperative to explore ECD teachers understandings of IK and how they incorporate it (IK) into their pedagogical practices, which is the aim of this thesis**.**

Another factor that has negatively affected the incorporation of IK into the ECD curriculum is the various ECD policy documents. They give conflicting information and few guidelines into how IK should or could be included in the curriculum. In the next section I briefly unpack the importance of policy in guiding teachers' practices in the classroom.

2.9 Policy

It is generally agreed that for an educational programme to function smoothly, it must be guided by a good and coherent policy. Haddad and Demsky (1995) define policy as an explicit or implicit single decision or group of decisions which may set out directives for guiding future decisions, initiate or retard action or guide implementation of previous decisions. Considine (1994 cited in Haddad and Demsky, 1995) view policy in two categories namely macro and specific policies. Macro policies:

1) Provide framework within which specific policies are developed.
2) Implemented through specific policies.

On the other hand, specific policies:

1) Specific objectives defined which are actionable
2) Apply selection of major instruments to meet specific goals.

From the above categorisation, ECD policy can be viewed as specific policy which works to achieve specific educational goals such as the incorporation of IK in ECD. In Zimbabwe various documents have been put in place to guide ECD practice. In this study, I examine the Education Act (1987, and 2006), SI 106 and the ECD syllabus.

2.9.1 Education Act 1987 amended 2006

This is the principal policy that guide operations of education in Zimbabwe where is ECD is part of the system. Though, it has loose connections to ECD, the practice is implicitly drawn from the old system starting from grade and it is mostly western influenced with little room for IK (see Section 2.5.1).

2.9.2 Statutory Instrument 106 of 2005

SI 106 of 2005 provides guidelines for ECD practice in Zimbabwe. Among its key provision are curriculum and pedagogy relevant to this study. According to SI 106 of 2005, on the ECD curriculum, there should be no reading, writing and number work. This provision also prohibits any work that may be regarded as grade one work. The policy tries to guard against formalisation of ECD in Zimbabwe and this resonates well with the inclusion of IK which don't have literacy aspects. The SI 106 of 2005 states that the ECD daily programme should be between three and half to five hours. This is the programme followed in ECD centres (see Table 5.4 showing the ECD timetable).

In addition, SI 106 0f 2005 states that ECD teachers should use the play pedagogy. It also focuses on the holistic development of the child. This has taken cognisance of the importance of play as a vehicle for learning in ECD. This policy seem to have been influenced by theorists such as Owen, Froebel, Macmillan sisters, Isaacs and Piaget (see sections 2.6.1, 2.6.2, 2.6.3, 2.5.4 and 2.6.5). The use of play pedagogies would create a conducive atmosphere for the inclusion of IK though it is meeting some challenges not only in Zimbabwe but the world over (see Chapter 3, section 3.3.4).

2.9.3 Director`s Circular 12 of 2005

The Director`s Circular minute number 12 of 2005, was written to operationalise the SI 106 of 2005. It emphasises the provisions of the ECD curriculum that ECD centre were supposed to avoid teaching reading, writing and number work. Teachers were expected to use play as the central pedagogy in ECD. This reiteration of the use of play acknowledges its importance in ECD and it created opportunities for the inclusion of IK. However, like SI 106 of 2005, it is silent on the place of IK in ECD. The circular also highlights the need for have a reasonable teacher pupil ratio of 1:20 with classes taught by qualified teachers. This would enhance the use of play pedagogies and the inclusion of IK in ECD.

2.9.4 Director`s Circular 48 of 2008

The Director`s circular 48 of 2008 was written to further operationalise the SI 106 of 2005. It also maintained the central role of play in ECD. However, it did not also clarify on the curriculum to be used except to maintain the same sentiments made by its predecessor policies. It also reiterated the need to have qualified teachers in ECD classes. However, the issue of qualification like in the other documents was left loose because they were not stated and this created a free for all scenario. Of particular mention in this circular is the engagement of parents in ECD through a Head start approach. However, this engagement of parents only focused on the development of infrastructure without including other dimensions like content and pedagogy where they could act as reservoirs of knowledge, thus enhancing the inclusion of IK in ECD.

2.9.5 The ECD syllabus

The ECD syllabus is used by the teachers in the implementation of the ECD curriculum. The syllabus is subject based and has subjects which are Expressive Arts, Language Arts, Mathematics and Science, Social Science and Technology (these subjects have since been renamed (New curriculum framework 2015- 2022). It focuses on the holistic development of the child using play pedagogies (MoESAC, 2012). It also adds that teachers are free to adapt activities to suit the developmental contexts of children.

Such flexibility may be good for the inclusion of IK in ECD. The adoption of the subject based approach as earlier mentioned could have been pushed by the desire to align ECD to higher levels of the education system (see section 2.7.1.4). The syllabus also states that there should be an hour for teacher directed activities per day which are usually the lessons in the above stated subjects (p.10). Though not clearly stated it implies that the duration of each teacher directed activity is 20 minutes.

However, content which forms part of IK is not taken into consideration in the policy. This excerpt recognises the importance of the learning context which is a fertile ground for using IK to make learning more relevant and avoid dissonance between what is learnt in school and everyday life, (Khupe, 2014). Yet, other documents acknowledge that despite the increasing interest in the provision of Early Childhood Development (ECD) there have only been skeleton regulations, mainly focusing on conditions for an ECEC centre.

2.10 Conclusion

The chapter reviewed literature informing the study. Different forms of knowledge such as rational, procedural and disciplinary knowledge were interrogated to locate their influence on IK. Various theories that have influenced the ECD programme in Zimbabwe were interrogated with the view to finding out how they enhance or inhibit the incorporation of IK into ECD teachers' pedagogical practices. Tensions between western forms of knowledge and IK have been discussed. These tensions have been exacerbated by ECD policies as well as the tensions within ECD itself both in western countries and Zimbabwe between knowing and wanting to implement sound

ECD practices but the practices placed on ECD teachers to schoolify ECD. ECD policy, children`s games and song that are a central vehicle to incorporate IK were also discussed and analysed. Chapter 3 explores the theoretical framework which is based on sociocultural theory.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 Introduction

This chapter examines socio-cultural theory and how an understanding of this theory provides a strong rationale for including IK in the ECD programme. It argues that because much IK (which has been explored in detail in section 2.3) is transmitted through various strategies such as games, storytelling, songs and rhymes these types of strategies become superb vehicles for the transmission and expression of IK, especially in early learning contexts.

The chapter further briefly explores some of the influences that shaped Lev Vygotsky's (the propounder of socio-cultural theory) thinking. It then unpacks the relevance of this theory, examines the major principles of the theory and sets out how each principle situates IK in ECD.

3.2 Vygotsky`s Background

Levi Vygotsky (1896- 1934) was born of Jewish parents in a small Russian town called Orsche. His mother was influential in his life as she taught him to care for his siblings, all of whom equally shared duties (Robbins, 2001). As a family, they would discuss history, literature, theatre and art. These discussions seemingly fuelled and interests and shaped his thinking. History, literature, theatre and art are part of culture and culture forms the basis for his theory.

Vygotsky`s developed an alternative approach to psychology which, as argued above, can be traced to his socio-cultural context. Vygotsky`s experience of living in Russia before, during and after the Russian revolution impacted his perspective of life. He adopted a Marxist-based approach to psychology which emphasises the importance of social interaction in human development rather than the more individualistic approaches adopted by psychologists working in the west (Robbins, 2001). However, Vygotsky`s approach did not become known in the West until 1958, and was not published there until 1962. It was brought to the West by runner who also introduced the term scaffolding. This term has come synonymous with mediation which is Vygotsky`s term, so scaffolding is a western corruption of mediation.

3.3 Socio Cultural Theory and IK

The main constructs of socio-cultural theory are explored in this section. These include social interaction, cultural tools, language; the role of play, the zone of proximal development and mediation and the co-construction process. Below is a diagrammatic representation of the principles of the socio-cultural theory.

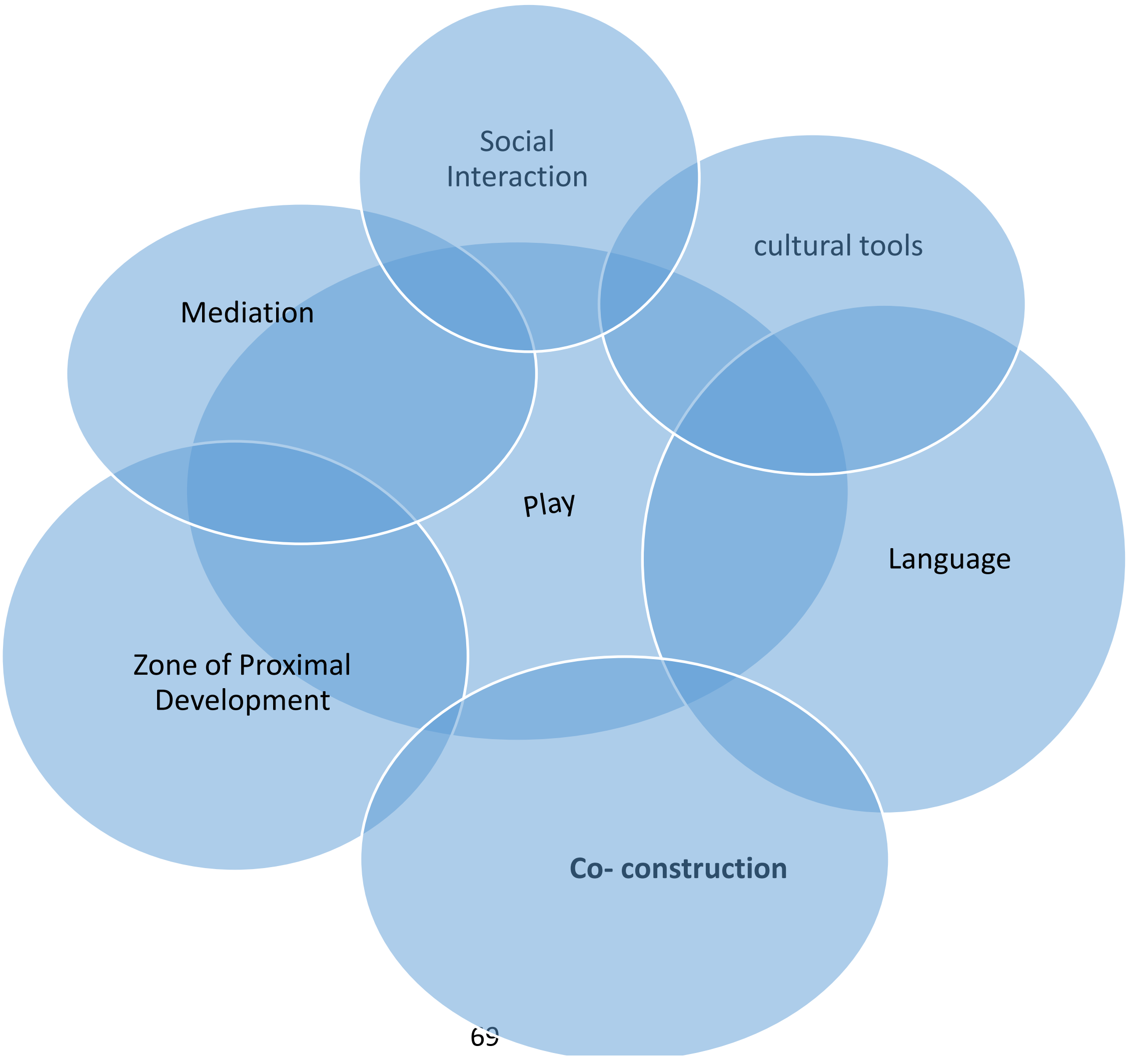

Figure 3.1 Principles of the socio cultural theory

Vygotsky is a socio-cultural historical theory because of the emphasis he places on how culture, now and in our past, has shaped our thinking. All learning takes place through social interaction. It starts off between people (a social context) and is then appropriated and internalised by the individual, that is, inter to intra. Thus, children learn through social interactions within their culture. Culture is immersed in IKS.

Grenier (1998 in Odora- Hoppers 2004) says IKS is the sum total of knowledge and skills which people in a particular geographic area possess, and which enables them to get maximum benefit from their natural environment (see section 1.9.1). In other words, IK is informed by culture and cultural traditions and learning is most successful when it is culturally bounded. This means learning becomes more meaningful when the curriculum is drawn from the child`s culture (Ndawi and Maravanyika, 2011). This is aptly illustrated in the following quote,

> When the child enters into culture, he not only takes something from culture, assimilates something, takes something from outside, but culture itself refines the natural state of behaviour of the child and alters completely anew the whole course of development (Vygotsky, 1977a, 223 cited in Bodrova and Leong, 2015, p. 373).

From the above statement, I advance that culture plays a pivotal role in the learning and development of the child as it is the back bone of behaviour shaping. The child gleans new knowledge from outside but this information is assimilated using the child`s already developed cultural knowledge.

Culture, thus, plays an important role in shaping cognitive development (Woolfolk, 2004). Culture also impacts on other developmental domains. Whiting and Whiting (1975) outlined a psycho-cultural model which can be closely related to socio-cultural theory. The psycho-cultural model focuses on relations between the development of individuals and their environment, social partners and institutional and cultural systems and values (Rogoff, 2003). This perspective stresses that understanding human development requires detailed understanding of situations in which children develop; the immediate as well as the less immediate cultural processes in which children and their ancestors participate (Rogoff, 2003). Thus, for learning to be meaningful in early childhood it is important to tap into the children`s culture and to contextualise their learning experiences. IK provides an optimal way of doing this in ECD.

Many of the children`s activities are shaped by their cultural settings and children require social interactions to make meaning of their environment (Vygotsky, 1978). Children`s making meaning and their mental approaches and processes can therefore be followed through their social interactions (Woolfolk, 2004) which are shaped and regulated by their cognitive structures which are thinking processes. Cognitive structures work on social structures to provide meaning.

As already stated, social interactions cannot operate outside culture and culture and cultural practices are strongly underpinned by IK. Therefore, to strengthen children’s early learning experiences content and activities should be informed by the children’s cultural contexts which are underpinned by IK (see sections 2.3 and 2.8). In ECD settings therefore teachers’ should incorporate IK into their pedagogical practices.

3.3.1 Social interaction

As shown in Figure 3.1, children`s learning in ECD is influenced by social dimensions such as social interaction. First and foremost, Vygotskian thinking indicates that the origin of knowledge construction should not be sought in the mind but in the social interaction co- constructed between a more and less knowledgeable individual (Lantolf, 2008). Social interaction is the basis of learning and development. Thus, the apprentice model of learning is grounded in life context and can form the justification for the incorporation of IK in ECD.

Learning is a process of apprenticeship and internalisation in which skills and knowledge are transformed from the social into the cognitive zone (Shabani, 2016). Vygotsky (1978) is of the opinion that the individuals’ mental functions can be derived from social interactions as particular processes and functions of the individuals can be traced to their interaction with others (Daniels, 2005). Vygotsky suggested:

> The social dimension of consciousness is primary in time and in fact. The individual dimensions of consciousness are derivative and secondary (Vygotsky 1978 cited in Daniels**,** 2005, p. 16).

According to Vygotsky (1978), the source of learning and cognitive development is triggered by the social interactions of the children rather than solely in the mind of the learners. Children can't be properly understood or studied in isolation because they are social beings. Thus, children can only properly be studied in their social contexts where their interactions can be observed within a shared cultural and societal context. IK, especially when considering young children, is the common denominator as within a specific cultural context all people draw on traditional knowledge which is considered to be indigenous (Swain, Kinnear and Steinman, 2011).

Socio-Cultural Theory stresses the role of individuals in the development of co-operative dialogues between the children and more knowledgeable persons in the society. These individuals help children to develop a greater understanding of their own culture and the society in which they live. Through these interactions children discover local knowledge which includes learning about their own community, their own language, games, stories, ways of living, thinking and behaving (Woolfolk, 2004). Vygotsky believed the language of certain tribes, groups or communities have clear signs and indications of their cultural beliefs and values, similarly the individual can show their cultural affiliation to a certain lifestyles of a particular tribe or community.

3.3.2 Cultural Tools

Historical, social and cultural mediation is fundamental in learning. Generally, children learn from their history as it is shared in their culture by more knowledgeable others. Vygotsky (1978) acknowledged the importance to cultural tools which support cognitive development. Signs and other symbols systems and cultural tools such as stories, games, taboos and songs bring a cultural heritage and history with them, and by learning to use these symbol systems and tools and the practices in which they are used, children integrate and draw on the experiences of others (Robbins, 2007, p. 8).

Thus, if children are given the opportunity to use their cultural tools, they are able to integrate them to experience other new and complex learning hence, the justification for incorporating IK into the ECD pedagogical practices. Shabani (2016), states that the construction of knowledge is a socio-culturally mediated process affected by physical and psychological tools and artefacts. According to Vygotsky, the cultural tools may be technological or symbolical tools that are used in a society (Woolfolk, 2004).

Physical and symbolic tools are artefacts created by human cultures over time and are made available to succeeding generations, which often modify these artefacts before passing them on to future generations (Shabani, 2016). Symbolic tools such as numbers, arithmetic systems, music, art and language are included. The cultural tools that are both physical and symbolic may include indigenous artefacts. These tools, according to Woolfolk (2004), can be real tools from day to day life which includes bows and arrows, printing presses, rulers, abacus, (and in keeping with a more modern era) computers and the internet, for example, can be viewed as technological tools).

Symbolic tools include numbers and mathematical signs, maps, work of arts, codes and signs (Woolfolk, 2004). The tools are important for mediation during the process of learning. It is also important to note that IKSs have a lot of tools that can be utilised to introduce young children, to concepts for example, songs, taboos, riddles and games such as "*chitsvambe*" (see section 2.8 for examples of songs and games drawn from the Shona culture). Additional cultural tools include artefacts such as models of huts, as well as mortars and grinding stones (*guyo nehuyo*) which are all forms of IK.

Woolfolk writes that according to Vygotsky,

> ...cultural tools have a tremendous role to play in cognitive development, he stresses that these cultural tools supports thinking, he also believes that all higher mental processes such as thinking and reasoning are supported by these cultural tools which are mediated by the psychological tools (Woolfolk, 2004, p. 80)

From the above assertion, learning is a mediated process from a socio-cultural perspective; mediation happens through control of cultural tools so that the mental functions can be developed (Mitchell, & Myles, 2004). The cultural tools assist the ECD children to master situations by repeatedly using them. For example, they get knowledge from repeatedly listening to folk stories, which will later assist them to master other new concept brought to them during learning. These tools help children to improve their learning. Children interact with adults, they exchange ideas and opinions which supports the children's to achieve mastery of concepts and skills.

Therefore, children's cognitive development progresses as they internalise ideas based on their own cultural norms by interacting with more capable individuals from their own community or group. Thus culture enhances the development of cognition and it brings with it valuable strands of knowledge that needs to develop the child holistically.

3.3.3 Language

Vygotsky believed in the centrality of language as a tool for thought and as a powerful means of mediation (Mitchell, & Myles, 2004). Vygotsky further elaborated on his socio-cultural theory by explaining the importance of language in linking the sociocultural processes such as co-construction, self-regulation, mediation and working within the Zone of Proximal Development. Language is, thus, Vygotsky's most important cultural tool.

According to Vygotsky (1978), a cultural tool is also a psychological tool. Humans use psychological tools to master their own mental functions. Therefore, private sometimes called inner speech is similar to thought and we use it to plan (silently in our head) our movements, reactions, activities, to monitor behaviour and to self-regulate behaviour. Thus, according to Vygotsky (1978), private speech is self-talk, which guides the thinking and action of the children. Private speech is considered to be self-directed regulation and communication with the self, and becomes internalized after about nine years (Woolfolk, 2004).

Simply, private speech guides young children's thinking and their actions (Woolfolk, 2004). Initially, they are guided by their parents and they then, using their silent, private speech imitate this parental guidance to help control their behaviour so that they do not do that which was first prohibited by their parents. Usually, children use this form of private speech up to the ages of 5 to 7 and private speech is then replaced by what Vygotsky called 'inner speech' (Woolfolk, 2004). Sometimes a child will say out loud what they are going to do as they plan while playing in the sandpit. This is often seen in ECD settings. Eventually, this becomes inner speech which, as previously mentioned, we all use all the time.

Vygotsky (1978) claimed that when private speech transforms into inner silent speech, it becomes an important and fundamental process in cognitive development. Vygotsky (1978) asserted that private speech, which might have external verbalizations, moves to inner speech which is the use of language that regulates internal thoughts without any external verbalization (Mitchell & Myles, 2004).
Within children's socio cultural context parents speak to children in their mother tongue; they correct and suggest patterns of behaviour. It is this interaction that children internalise. I suggest that private speech can be likened to indigenous language or mother language. When children sing and play internal cognitive processes take place. The games, stories and songs are cultural artefacts and possible ways of mediating learning.

3.3.4 Play

In play, psychological and other cultural tools are used to mediate action. Songs, games (all of which involve language, the most important psychological tool) are the mediational means through which interaction and learning occurs. Play is thus mediated by cultural tools such a signs (a sign for Vygotsky is anything that can communicate meaning). Explicitly:

- Speech (which utilises language)
- Words (which make up a language)
- Sign systems (writing, number systems, etc.)
-

Play, therefore, is mediated by cultural tools such as signs, and symbols, toys and other objects, and, of course, by language. A child will engage in pretend or fantasy play. In so doing, he is demonstrating a range of complex abilities. He is able to behave, for instance, as if he were on an aeroplane although he had never been on one. He may, probably will, hypothesise how to fasten a seat belt and tighten it, although he had never had an opportunity to do so on a plane.

Vygotsky expressed his main ideas about play in the 1933 lecture quoted as "Play and its Role in the Mental Development of the Child. Bodrova and Leong (2015, p. 37) claim that "this lecture can rightly be considered the blueprint for theories of play developed in the cultural- historical tradition." Vygotsky was concerned with the origin of play, how it develops and whether play is the predominant activity of children. Vygotsky (1978) stated that a child`s play is not simply a reproduction of what the child has experienced, but a creative reworking of the impressions the child has acquired. He concluded that play is not a predominant activity during preschool years but is the leading source of development.

According to Karpov (2005), by claiming that play leads development in children between ages three to six Vygotsky was emphasising the importance of play to help children develop self-regulatory behaviours. For Vygotsky, self-regulatory behaviours were essential learning characteristics that young children had to acquire to enable them to success in formal schooling (Karpov, 2005). This view is further reinforced by the following statement,

> In play, a child is always above his average, above his daily behaviour, in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all developmental tendencies in a condensed form, in play; it is as though the child were trying to jump above the level of his normal behaviour (Vygotsky, 1967, p. 16 cited in Bodrova and Long, 2015, p. 371).

From the above statement, two important deductions can be made. The first one is a clarion call to the adults (parents and teachers) not to interfere with children`s play, children should be encouraged to play, for during play they become 'taller' than their average behaviour. The children can create their world informed by their experiences and conquer their world. The second argument is that play, which is derived and situated in the child`s culture, is the central vehicle to teaching and learning in ECD. According to Nyota and Mapara (2008) cited in Amlor (2016, p. 63),

> Knowledge expressed in play and singing games are accessed through children`s play activities which provide social context for the accumulation of cherished socio cultural virtues and values which comprise good behaviour, discipline, hard work and competitive spirit, encountering and handling of issues of success and failure as well as assuming leadership roles. On the whole, these games reflect indigenous education embedded in the society of the people.

Vygotsky also said that through socio dramatic play in particular, children acquire self-regulatory behaviours. Vygotsky rejected the view that play is due to pleasure expression; instead, play is the imaginary, illusory realisation of unrealised behaviours (Seefeldt and Barbour, 2005).

> Play-development relationship can be compared to the instruction-development relationship but play provides a background for changes in needs and consciousness of a much wider nature. Play is the source of development and creates the zone of proximal development. Action in the imaginative sphere is an imaginary situation, the creation of voluntary intentions, and the formation of real life plans and volitional motives- all appear in play and make it the highest level of preschool development (Vygotsky, 1967, p. 16 cited in Bodrova and Leong, 2015, p. 373).

From the above assertion, it can be concluded that play creates opportunities for children to learn new things. This can be done as children are presented with challenging opportunities during play. But to be really meaningful play experiences should be based on what children know and are interested in. Therefore play which draws on IK practices becomes an essential vehicle to fuel the learning of young children.

3.3.5 Zone of Proximal Development (ZPD)

The Zone of Proximal Development (ZPD) is another important construct in Socio-Cultural Theory. The ZPD is a domain where improved learning can takes place. The learner, with the assistance of a more knowledgeable other, is capable of achieving what the learner would not be able to achieve on his own. To support this learning the more knowledgeable other makes use of cultural tools, of which language is one of the most important (Mitchell & Myles, 2004).

The ZPD is not any physical place in the mind but it's a metaphor for understanding and observing that how mediated ways and means are internalized (Lantolf, 2000, p. 17). Vygotsky (1978) claimed that there are some problems which a child cannot solve by himself without effective mediation. If the task is successfully mediated, the child would solve the problem in the ZPD. In time the child will be able to solve the problem without mediation. In other words, the ZPD is an area where a child can't solve a problem by himself alone but it needs the guidance of an adult or a more knowledgeable peer to lead him to success, (Woolfolk, 2004, p. 86).

Vygotsky (1978) further defines the ZPD as the difference in the mental process in what a person can achieve alone and how the same person after getting efficient mediation from, for example, the cultural setting or through social interaction or guidance from a teacher or more knowledgeable peers can accomplish the same task with greater proficiency or accuracy (Lantolf, 2000, p. 17). Vygotsky (1978) proposed,

> ...that an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. Once these processes are internalized, they become part of the child's independent developmental achievement (Vygotsky, 1978, p. 90).

Thus, as children engage in learning activities, they need to interact with their environment and peers creating a social context which provides new knowledge in the form of IK.

3.3.6 Mediation

Though Vygotsky used the term 'mediation,' when his theory was introduced to the west, Bruner introduced the term 'scaffolding' (Rogoff, 2003). Frequently, therefore, especially amongst western authors the term scaffolding is used when referring to supporting children's learning process. Mediation is considered one of the most important principles of Vygotsky's Socio-Cultural Theory. According to Vygotsky (1978), mediation is a kind of support or help which is given in problem solving situations; it provides the help, hints or clues for problem solving, it suggests a better alternative to the learner to solve the problems in future (Fieldman, 2009).

Hence, understanding of IK on the part of the ECD teacher and its subsequent incorporation becomes critical in the learning and development of ECD children as this assists the teacher to provide developmentally appropriate activities to children. Vygotsky (1978) states that learning takes place when there is a positive interaction with an adult or a more capable member of the culture. This interaction provides support for the children's learning. These more capable persons play the role of guides or teachers providing necessary direction or support for the solution of problems (Woolfolk, 2004) which might be done using IK.

Children get sufficient information in order to discover the outer world through the support or guidance of socially interacted individual. These individuals may be from the family of the child or a teacher or peer. This support may be called assisted mediation which enables children to build of concept or understanding in order to solve a particular problem in future (Woolfolk, 2004). Vygotsky (1978) also advanced that a child can be taught any subject effectively just by adequately mediating the learning in the child's ZPD. The use of mediation (scaffolding) in the ZPD helps children to build and construct new knowledge (Woolfolk, 2004). During the learning of new skills or content IK can provide the link between what the children already knows and can do and the new knowledge the child is expected to master. For example, familiar songs and games can be used as a mediatory tool to help bridge the acquisition of new knowledge.

Various indigenous pedagogies like games, stories and riddles could be used to scaffold ECD children to achieve certain developmental tasks, for example, "*nhodo*" can be used to teach pre-number concepts. In summary, mediation draws on the cultural tools such as language. As mediation takes place within a sociocultural context, the child`s ZPD can be extended. During mediation, social interaction takes place; hence, development can be maximised using IK.

3.3.7 Co-construction process

Woolfolk (2004, p. 82) claims that for Vygotsky, a “co-constructed process is a social process in which people interact or negotiate to create an understanding or to solve a problem.” Vygotsky (1978) believed that every function in the child’s cultural development appeared twice: first it is observed at social level and then at later stage at the individual level. The first implication is therefore between people (inter psychological) and then inside the child (intra psychological). For Vygotsky, this meant that the “high level mental processes first functions among the people as relevant activities that are co-constructed during shared activities” (Woolfolk, 2004, p. 79; Rogoff, 2003). After receiving co-constructed help, children internalize the use of the cultural tools and can easily and properly use those tools in the future on their own (Woolfolk, 2004, p. 79).

The co- construction process is also highlighted by Rogoff (2003) when she explored guided participation. For example, in Shona culture, parents rarely sat down with their children to deliver lessons. But, children were guided during authentic tasks. Children learnt how to cook during family cooking time. This is similar to an apprentice model. IK and indigenous practices are passed onto children during the completion of everyday tasks. Thus, achieving a task together with the child resonates well with co- construction of knowledge.

In recent years, many contemporary Early Childhood Development models such as DAP, Reggio Emilia in Italy and Te Whariki in New Zealand have been influenced by sociocultural theories (Bredekamp and Copple, 1997); Abbott, 2001; Carr, 2001). This socio cultural dimension has impacted early childhood practices years and begun to sketch an additional role for teachers; a role where they co-construct learning opportunities with children based on a number a variety of contextual factors. Early Childhood Education is framed broadly in terms of cultural contexts and not in relation to the individual child reaching standardised age-related norms of development.

Four broad strands underpin early childhood practice from the socio cultural perspective. These are a conceptualisation of learning and pedagogy; the nature of knowledge; assessment and evaluation; and quality in the early years (Anning, Cullen and Fleer, 2009). These four strands are represented diagrammatically in Figure 3.2.

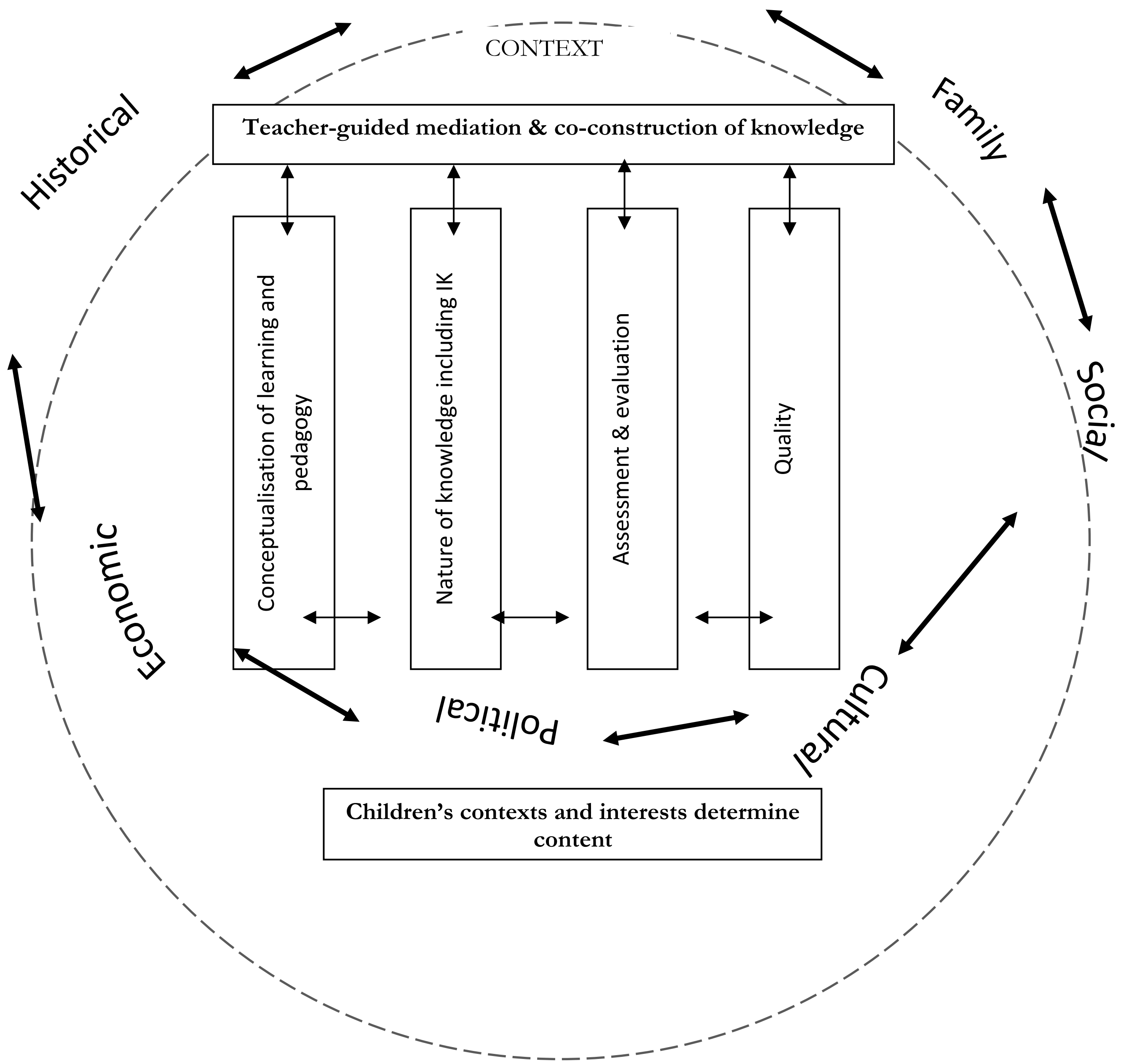

Figure 3.2: A diagrammatic representation of a socio cultural model of learning and pedagogy (adapted from Excell, 2012)

Fleer, Anning and Cullen (2009) argue that these four strands necessitate significant changes in both teaching strategies and methods of assessment as there is increasing recognition of the importance of the role of adults, "particularly their knowledge base and their capacity for sustained shared thinking" (p.188). They also note that children are increasingly being recognised as powerful players in their own learning. Children are viewed as capable, competent and unique human beings who are able to make and co-construct meaning together with responsive adults such as the teacher as well as their peers.

This understanding of co-construction of knowledge requires that teachers become aware of what children know, are thinking and understanding to enable them to engage with a body of knowledge. Reciprocally, teachers need to learn to share and develop their own thinking about the topic. "Co-construction requires that teachers are willing to find out more about content knowledge as well as develop excellent dialogue skills" (Jordan, 2009, p. 43). In the ECD phase, this approach resonates well with incorporation of IK as the foundation for knowledge building in children through interpersonal dialogues with teachers.

Interpersonal relations are, for Vygotsky, another type of meditational means (Daniels, 1996). In sociocultural-historical informed pedagogy mediation is underpinned by the notion of co-construction. As Wood (2009, p. 29) asserts,

> Indicators of effective [ECD] pedagogy include opportunities for co-construction between children and adults, including 'sustained shared thinking', joint involvement in child- and adult-initiated activities and informed interactions in children's self-initiated and free-play activities. The practitioner's role is conceptualised as proactive in creating play/learning environments, as well as responsive to children's choices, interests and patterns of learning.

Wood (2009) notes, that while there is substantial evidence of learning through play (see 2.6 and 2.7) there is less evidence of teaching through play and suggests that the sociocultural-historical approach places a greater emphasis on the role of the teacher in planning for play. Wood (2009) asserts that alternative strategies for implementing an effective play-based curriculum in early years of education could be explored through a "pedagogy for play" (p.27) which she defines as,

> The ways in which early childhood professionals make provision for play and playful approaches to learning and teaching, how they design play/learning environments, and all the pedagogical decisions, techniques and strategies they use to enhance learning and teaching through play' (Wood, 2009, p. 27).

Furthermore, according to Wood (2009), in a socio-cultural approach, learning through play is not left to chance. She comments that,

> Play is sustained through reciprocal and responsive relationships, and is situated in activities that are socially constructed and mediated. While children's interests remain central to curriculum planning the subject disciplines enrich and extend the children's learning (p.27).

However, Woods (2009) notes that deep understandings of play based ECD programmes remains problematic. Wood (2009, p. 29) confirms this when she writes,

> In contemporary curriculum models which endorse play within an integrated pedagogical approach achieving good quality play in practice remains a substantial challenge especially where teachers face competing demands for accountability, performance and achievement and competing notions of what constitutes effective teaching and learning.

And these are challenges faced by the ED teacher in Zimbabwe (see chapter 2, section 2.9). However, these challenges can be avoided. It could be argued that through a play based approach to pedagogy the goals of the Zimbabwean ECD curriculum could still be achieved. And in so doing IK could be successfully incorporated into the ECD curriculum.

The teacher has a definite role in planning an interactive, learning environment that offers challenging and stimulating choices to children that will promote holistic development (see section 2.7.1.3). However, the socio-cultural approach places more emphasis on the role of the teacher in mediating play as well as recognising and managing different sociocultural contexts that might be represented in the teaching and learning environment.

3.4 Conclusion

The chapter discussed the major constructs of socio-cultural theory and argued that it provides a strong theoretical framework for this study. In this chapter, I explored how IK which is drawn from cultural practices and traditions informs the context and the underpinning content upon which ECD practices should be based. I demonstrated how social interaction is enhanced when indigenous mediation tools are used and how this leads to more effective learning.

Mediation is critical in assisting children to achieve learning goals and this can be done through the use of indigenous pedagogies such as songs, riddles, games and stories. However, these types of pedagogies form the backbone of all quality ECD and they are not specific to culture. They become indigenous to a population, for example, because of the specific content or the ways in which the knowledge is imparted. Importantly, Vygotsky states that learning should be entrenched in the children`s history, social and cultural contexts, hence it is essential to create rich and frequent opportunities for the incorporation of IK in ECD. The next chapter discusses the research methodology.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This chapter discusses research methodology for the study, that is, the research paradigm, research design, the target population, sample and sampling techniques as well as the research instruments I used to collect data. It also considers the data analysis plan and the ethical underpinnings that informed the research.

4.2 Research Paradigm

For this research, which explores ECD teachers` understandings of IK and its (IK) incorporation into their pedagogical practices, I adopted an interpretivist or qualitative research paradigm. Qualitative research is an inductive, subjective process of inquiry undertaken in natural settings in order to build a holistic picture which is described in words that include the detailed views of the informants dialogues captured in informal personal language (Chakraborty, 2012).

Qualitative research is interpretivist in nature (see Chapter 1, section 1.11). In the interpretivist paradigm, the researcher is not perceived as being entirely objective; rather he/ she is a part of the research process (Rowland, 2005). Ary, Jacobs and Razavieh (2000) refer to qualitative research as a way of acquiring types of information that have aspects that are unable to be measured or found in approximation as is with quantitative techniques. Contrary to quantitative techniques which demand numerical approximations to describe and explain a phenomenon, I chose qualitative research in order to explore issues in greater detail and to gain a nuanced understanding of the phenomenon. The qualitative techniques that I chose had a promise of enabling me to gain a deeper, fuller understanding of the phenomenon (Creswell, 2007). In addition, this approach enabled me to answer questions by analysing and making sense out of unstructured data.

In qualitative research, emphasis is placed on the natural setting and the points of views of the research participants (Chiromo, 2006). This implies that what is found about a certain phenomenon in one area might not necessarily apply in a different area. Thus, findings are not necessarily generalizable. What was found in this research is peculiar to ECD teachers in three schools in Manicaland Province of Zimbabwe as people's perceptions differ depending on their contexts and experiences; because qualitative research attempts to make sense or interpret phenomenon in terms of the meanings people attach on them. As previously mentioned, this research attempts to make sense of ECD teachers' perceptions on IK and its incorporation in their pedagogical practices.

Qualitative research is thus descriptive in nature, concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident or trends that are developing (Chakraborty, 2012). Denzin and Lincoln (2008 p.4) offer a comprehensive definition of qualitative research as:

> [a] situated activity that locates the observer in the world, consisting of a set of interpretive material practices that make the world visible. The practices turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings and memos to the self. Qualitative research involves the studied use and collection of a variety of empirical materials- case study, personal experiences, introspection, life story, interviews, artefacts, cultural texts and production, observational, historical, interactional, and visual texts that describe routine and problematic moments and meanings in individuals` lives.

From the definition above, I deduce that qualitative research studies are day-to- day experiences and materials that give people a meaningful existence into their life world. Qualitative research allows one to examine people`s experiences in depth using particular research methods such as document analysis, interviews, observations and visual methods (Mason, 2002; Kumar, 2014). The paradigm was appropriate to the study because it enabled me to find out the ECD teachers` understandings in the natural settings and make thick descriptions of the findings.

Qualitative research uses a descriptive write-up, which ends with a hypothesis and is grounded in theory in its nature (Best and Khan, 2000). That means, after finding out relationships that exist, opinions held, processes that are going on, effects that are evident or trends that are developing, a conclusive hypothesis can be made. This is because in qualitative research variables are interwoven in a complex manner and difficult to measure for example concepts like beauty, or in this case, teachers' perceptions (Ary, et al., 2000). Usually, one will not take an interest in something they do not understand or something they perceive to be of no importance. Thus, the design was chosen to elicit more responses and get an in depth insight of ECD teachers understandings of IK and how they incorporate it (IK) into their pedagogical practices.

According to Cohen, Manion and Morrison (2011), qualitative research provides perspectives of specific social and cultural context. Qualitative or interpretivist stance is holistic and considers numerous variables including context of study (Klein and Myers, 1991). Data is freely defined by the subjects rather than structured in advance by the researcher, there is no predetermined hypothesis to be proved or disapproved but findings make up the hypothesis (Ary, et al., 2000; Chawawa, 2005). Hence, it becomes important to have an analytical framework in the study.

Subjects are able to freely state their views which are unique to their social and cultural context. They are not expected to rely on a purely theoretical framework which is from a totally different social and cultural context. Thus, qualitative research provides rich and detailed information about the affected population. In this research, ECD teachers felt comfortable enough to speak freely about their understandings of IK and how they incorporate IK in their pedagogical practice without any restrictions imposed on them by the researcher.

Qualitative research provides data collection processes which can be carried out with limited resources as well as a limited number of participants (Chiromo, 2006). That means, the researcher can save time as well as money. Being able to use limited resources as well as carrying out the research with a limited number of participants was an advantage to the researcher as at time and funding was constrained. The study focused on nine (9) participants making data gathering effective and efficient.

However, according to Chiromo (2006), qualitative research might lack consistency and reliability because the researcher employs different probing techniques and the participant can choose to tell some particular stories whilst ignoring others. The researcher, therefore, had to be thorough in probing in order to bring out all important facts and had to be observant for non- verbal cues and to ensure that he reflected upon his own possible biases. Another way to enhance credibility of the study was to use more than one data collection method which was done in this study. Hence, I submit that data collection was creditable and trustworthy (see section 4.5).

4.3 Research Design

Best and Khan (2000) define a research design as a programme that guides investigation to the process of collecting, analysing and interpreting findings. Chiromo (2006) refers to a research design as the overall strategy that one chooses to integrate the different components of the study in a coherent and logical way, thereby ensuring an effective address to the research problem. From these definitions, a research design is a plan specifying and guiding the methods and procedures for collection, measurement and analysis of gathered information in order to effectively answer the research questions. Cohen, et al., (2011) claim that a research design provides the glue that holds the research study together. Thus, a research design gives a clear roadmap of carrying out the study. For this research a case study was chosen as the research design to guide the researcher through his study.

4.3.1 A case study

In this study, a multiple case study was adopted as the study was carried on three sites namely Vambai, Tariro and Kurai (see chapter 5). A case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used (Yin, 2009). According to Chakraborty (2012), a case study is a research method that excels at bringing an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research. From these definitions, a case study is an in- depth examination of a contemporary phenomenon often undertaken overtime and is usually done within its natural or real- life context.

Yin (2009) postulates that a case study is carried out in the participant`s natural everyday environment. No variables are controlled or manipulated. The researcher is an observer, either a participant or a non- participant observer, but an observer all the same. He does not change anything in the natural setting for the purpose of the research. Things should unfold naturally without manipulation. In this study the researcher observed how ECD teachers incorporated IK in their teacher directed activities and free play both indoor and outdoor. All this was done in a natural setting. Nothing was changed for the purpose of the study.

A case study depends mainly on qualitative descriptions through words (Best and Khan, 2000). I had to make written reports on observations made on how ECD teachers understood IK and how they incorporated it into their pedagogical practices. In a case study, the researcher might become attached to the participants as there is need to develop a closer relationship (Chiromo, 2006). Good rapport is one of the most important ingredients for a fruitful interview. The researcher had to first build a good rapport with the interviewees before embarking on the interviews.

Usually, people find it difficult to open up to strangers, making it important for the researcher to get to know the participants. I got to understand the participants better as I established a friendly and open atmosphere with the participants. The researcher also has to make sure the participants are protected from any harm and they, the participants, understand that the researcher has their best interest at heart (see section 4.6). By promoting good rapport with the participants they are more likely to contribute truthfully and accurately during the conversations.

4.4 Participants

Participants are people who were involved in the study. The study comprised of ECD teachers, ECD learners and school heads selected using various procedures which are discussed in section 4.4.3. Parents of the children participated in the study by consenting on behalf of their children whom I observed during observations of classroom activities.

4.4.1 Population

Yin (2009) defines a population as a well-defined collection of individuals known to have similar characteristics. Cohen et al. (2011) define population as the aggregate or total of objects or individuals who are to be covered under a study. Population can also be defined as a collection of objects, events or individuals having some common characteristics that the researcher is interested in studying (Chakraborty, 2012). Therefore, a population refers to the possible participants in a delimited area under study in a research. In this research the population are the ECD teachers in Manicaland province particularly Mutare district.

4.4.2 Sample

Ary, et al. (2000) define a sample as a set of objects, events or individuals selected from a statistical population by a define procedure. Chakraborty (2012) defines a sample as a subset containing the characteristics of a larger population. Therefore a sample is a small part of anything intended to show the qualities, style or nature of the whole. Thus, an effective sample, in order to bring out a clear picture should represent the population from which it has been chosen. For this research, the sample comprised six (6) ECD teachers and three (3) school heads. All the ECD teachers were qualified with a minimum of a Diploma in Education specializing in ECD. Two teachers and one school head were drawn from each school so as to have equal representation of the school.

4.4.3 Sampling procedure

To come up with a sample, the researcher had to choose a sampling procedure to use. As the study was qualitative, a non-probability sampling procedure was chosen. I chose non-probability sampling because, not all the individuals in the population are given equal chances of being selected (Best and Khan, 2000). Rather there was a specific targeted group, in this case the ECD teachers in the Mutare district.

This could also be called non random sampling, where some elements of the population have no chance or any chance of selection (Yin, 2009). Chiromo (2005) asserts that the subjects in a non- random sample are usually selected on the basis of their accessibility. I chose a non-probability sampling procedures in the form of convenience sampling where I chose participants who teach in ECD classes, had an ECD qualification and were willing participants.

Convenience sampling is a technique where subjects are selected because of their convenience, accessibility and proximity to the researcher (Yin, 2009). Thus, an additional selection criterion was that the participants were selected because they were relatively easy to recruit for the study. Chakraborty (2012) posits that a convenience sample is either a collection of participants that are accessible or a self-selection of individuals willing to participate which makes it easier for the researcher.

Choosing ECD teachers who were willing to participate in the study meant easy accessibility especially as most of them voluntarily offered to participate. Though they were informed that they could withdraw from the study at any time if they so wished, none did so. I preferred this sampling technique because it is fast, inexpensive, easy and the participants are readily available. It is also economical in time as well as money.

The obvious disadvantage of convenience sampling is that, it has sampling bias and is not representative of the entire population (Chiromo, 2006). This can result in limitations in generalizations and inference making about the entire population, and if the sample is not representative of the population, the results of the study cannot speak for the entire population.

To help overcome the problem, I selected participants from both ECD classes, that is ECD “A” and ECD “B”. I also made sure that the three schools that formed the sample were equally represented with two ECD teachers each and the school head. However, I do acknowledge that findings cannot be generalized across the ECD teacher population.

4.5 Research Instruments

A research instrument is a testing device for measuring a given phenomenon using tools such as surveys, an interview and/or an observation and document analysis (Ary et al, 2000). Flick (2005) states it more simply when he describes research instruments as measurement tools designed to obtain data on a topic of interest under study. Therefore, research instruments are the tools that were used to explore information about ECD teachers' understandings of IK and how they incorporated IK into their pedagogical practices.

Ary et al., (2000) describe research instruments as the nuts and bolts of a study. This means research instruments hold the study together as a meaningful whole. The more shallow the instruments the less meaningful the study becomes (Bhebhe, 2014). Thus, if research instruments are not carefully chosen and used, one may fail to capture a lot of meaningful data making the findings of the study less significant.

In this study, surveys, observations, video recordings, interviews and document analysis were used as data collecting instruments. This was done to make sure that data collection remained credible, thereby combatting possible biases associated with a specific instrument. In brief, it was envisaged that by using a number of different instruments they would complement each other and ensure credibility of rich, in depth findings.

4.5.1 Surveys

In this study, I used a survey (questionnaire) as an initial data collection instrument which I administered to ECD teachers (see Appendix 1). Another survey was administered to school heads (see Appendix 2). Cohen, et al., (2011) define surveys as a set of questions that solicits information that the researcher requires from the respondent about a specific phenomenon. For the researcher to get the desired information, the questions needed to be carefully planned and appropriately worded with clear instructions given on how to complete the survey.

In this study, the survey comprised of both closed and open ended questions. Respondents ticked chosen answers on closed questions and were requested to fill in details in the spaces provided for the open-ended questions. The surveys provided a way of collecting biographical data and were also used to collect initial information on ECD teachers` understandings of IK and its incorporation into their pedagogical practices.

To encourage participants complete the survey, I hand delivered them to those participating in the study and collected them during observation sessions. I used a survey because it is a method of data collection that allows the participants to give information whilst they maintain anonymity, hence, boosting their confidence. It was also a first data collection instrument and thus I felt it could inform questions to be asked in the interview and also guide observations.

A recognised limitation of surveys is that they might not be adequately completed, either because questions are not fully understood or because participants for some or other reason withhold information (Bhebhe, 2014; Magwa and Magwa, 2015). Though this occurred with a few of the participants these limitations were controlled through the use of other methods such as the interview and observations.

4.5.2 Observation

Observation simply means looking at something. According to Kumar (2014) observation is an act or instance of viewing or noting a fact or occurrence for some scientific or other special purpose. Observation is the action or process of closely monitoring something or someone (Creswell, 2007). Observation, therefore, involves close monitoring of an act or an instance from the primary source, capturing it as it is or as it happens.

There is no room for artificiality or manipulation of variables. It also enables the researcher to verify and consolidate information collected through other sources such as an interview as what people say might be totally different from what they actually do when observed (Best and Khan, 2000). Observation is a more natural way of gathering data because records of what happens are made as events occur in a natural environment (Best and Khan, 2000). Through good observation it becomes possible for the researcher to obtain first-hand information about events and interactions.

Through observation, I was able to gain insights into how ECD teachers incorporate IK into their pedagogical practices. As Chiromo (2006) posits, an observation seeks to ascertain what people think, that is what are their perceptions and what they do (actions) by watching them in action as they express themselves in various situations and activities. The researcher was able to ascertain ECD teachers' understandings of IK and various techniques they used to incorporate IK during their lessons by watching them express themselves in action in various situations and activities.

A person can either be a participant or non-participant observer. I collected data as a non-participant observer as I did not participate in the activities of the group being observed (Kumar, 2014). I spent considerable time, two to three hours per day for five days with each of the teachers and their class of children observing their activities and lessons. Thus, I operated as a 'fly on the wall.' During lesson observations, I sat at the back of the classroom to avoid distracting learners but was well positioned enough to observe almost every action in the classroom. This had the merit of potentially reducing observer bias.

As mentioned previously, I observed each teacher five times for two to three hours per day. Activities observed were both teacher directed and free play. I took field notes bearing Lofland (1971 in Chawawa's 2005) guidelines in mind while doing so. Chawawa (2005, p. 248) provides the following guidelines to follow when recording observations:

> 1) [Transcribe] the notes as quickly as possible after observation, since the quantity of information forgotten is very slight over a short period of time but accelerates quickly as more time passes.
> 2) Discipline yourself to write notes quickly and reconcile yourself to the fact that although it may seem ironic, recording field notes can be expected to take as long as is spent in actual observation.
> 3) Writing has the advantage of stimulating thought.
> 4) It is advisable to make at least two copies of field notes and preferable to type these on a master copy for reproduction. One original copy is retained for reference and other copies can be used as rough draughts to be cut up, reorganized and rewritten.

5) The notes ought to be full enough to summon up for one again, months later, a reasonably vivid picture of any described event. This probably means that one ought to be writing up, at the very minimum, at least a couple of single space typed pages for every hour of observation.

Johnson and Christensen (2000) assert that there is a danger that the researcher may fail to record objectively and accurately. If the researcher is concerned with what is seen or heard without digging deeper or applying some critical thinking he may end up with shallow research information. This could adversely affect the significance of the findings.

I was mindful of Chakraborty (2012) assertions that data collected through observation may be more true and real than data collected by any other data collecting instrument as it is captured in the natural setting. Thus, as a researcher I watched carefully with a critical eye in an attempt to notice things otherwise might seem insignificant. I also thought critically about what I noticed so as to come up with a rich research study.

Sometimes there was need to dig deeper on what was observed rather than take everything on face value. I would make follow-up discussions with the participants to the observations made and these were usually through informal interviews.

Chakraborty (2012) avers that the researcher as the observer, being an outsider, can see phenomena about the situation which those people who are directly involved in it may take for granted. That means there are aspects or ideas which ECD teachers as well as administrators and possibly researchers take for granted as far as ECD programmes and the incorporation of IK is concerned.

If after observation these were considered or acted upon they could possibly help to enhance ECD teachers understanding of IK and its incorporation into their pedagogical practices. This might also provide a way of answering research question 3 on the strategies for including IK in teachers' pedagogical practices. I also applied this thinking to myself so that I did not take things for granted. For example, I interrogated the nature of learning material such as charts and play materials, the sitting arrangements and even the routines to better understand the ECD teachers` perceptions of IK and how they incorporate it (IK) into their pedagogical practices. Even though, observation as an instrument for data gathering is invaluable there are disadvantages. It can be subjective in that the researcher may have preconceived assumptions or attitudes towards the person or group observed thereby causing distortions (Cohen, et al., 2011). As already mentioned, I established good rapport with participants limiting personal biases. In addition, I was flexible enough so that I did not disturb usual classroom routines and activities to continue. Another disadvantage of observation is that one might miss certain classroom interactions. I hoped to avoid these omissions by also making use of video recordings.

4.5.3 Video recording

Video-recordings also provide a good way to minimize bias and to improve the accuracy of observations. I also recorded some of the activities and lessons using a video recorder. Prior to video-taping, I briefed participants both verbally and in writing (see ethics in section 4.6). Data was obtained from video recordings to verify my observations, to reflect on the findings and ensure I included pertinent details for later analysis. Thus, the video recordings were done to get deeper insights into the ECD teachers' understandings IK in their natural settings which are their classrooms. Videos also assisted me to pick up on gestures and facial expressions shown by participants during interviews and observations that could add deeper meaning to my data. The videos were transcribed into text.

However, video recording activities sometimes presented a limitation. At times I felt I missed some pertinent information relating to the class participation during activities. To overcome this challenge, I made some follow up questions to situations where I felt I had missed something. I also referred to the other instrument collection tools to fill in the gaps in the data obtained.

4.5.4 Interviews

In this study, interviews were also used to collect data from ECD teachers and school heads. An interview is a face to face conversation between the researcher and the participant for the purpose of collecting data on a research topic of interest (Chiromo, 2006). Patton (2002), states that the purpose of interviewing participants is to find what they think about something or someone. In this case the researcher carried out in depth conversations to determine ECD teachers` understandings of IK and how they incorporate it or not into their pedagogical practices.

I used both semi structured (see Appendix 3) and informal interviews with both ECD teachers. Another interview guide for school heads was drawn up to establish their perceptions of IK and what they thought about the ECD teachers' understandings of IK (see Appendix 4).

The interview guide was intended to elicit further insights into ECD teachers` understandings of IK and how they incorporated it into their pedagogies Best and Khan (2000) define a semi structured interview as an interview in which an interview guide is used only to help the researcher to focus the participant on the topics at hand without constraining them to a particular format. Chakraborty (2012) defines the semi structured interview as an open interview allowing new ideas to be brought up during the interview depending on what the interviewee says. Therefore, a semi-structured interview can be seen as an interview not restricted to a fixed interview guide but flexible enough to allow for probing and clarifications. Not all questions are necessarily designed and phrased ahead of time. A semi-structured interview can be used both to give and receive information, allowing both the interviewer and the interviewee to probe for details (Gay, Mills and Airasian, 2011).

I used semi-structured interviews because they allowed me to focus the discussion on the ideas under study yet also allowed for probing for more detail whenever the need arose. The interviews were carried out with each participant for a period of one hour at a time convenient to each participant. Each participant was interviewed individually in a space convenient to the participant. The researcher took six days to interview the nine participants. In this study, interviews helped to establish the credibility of the observations and what was videotaped to gain increasing clarity about the ECD teachers' pedagogical practices.

Chakraborty (2012) claims that interviews have merit over other data collecting instruments in that the interviewer can pursue in depth information they require about a phenomenon. Through the participants' comments, facial and bodily expressions, tone of voice, gestures, feelings and attitudes, an interviewer can acquire information that would not be conveyed in any other way. By watching participants' body language (their facial expressions and gestures), I was able in part to gauge whether the teachers' understandings were genuine or possibly superficial. This enhanced the value of using interviews as I could corroborate facts and actions. Cohen, et al., (2011) also state that interviews are the most appropriate technique for revealing information about complex emotional subjects or probing sentiments that may underline an expression or statement.

Indeed, through the interviews I was able to ask probing questions and glean greater clarity when the participants' responses were not clear. This enabled me to get a distinct picture of the ECD teachers` understandings of IK and their incorporation of this knowledge into their pedagogical practices.

However, interviews as data collecting instruments have their own drawbacks. Chakraborty (2012) asserts that interviews require certain skills which the researcher might not have. To capture all the information, a researcher must have a multiplicity of skills such as the ability to establish good rapport with the interviewees and being able to take note of their gestures and other non- verbal cues. During the interviews, I captured written notes and audio taped the response. An audio recording was useful in minimising errors in data collection and also enabled me to fill in any missed detail during capturing. The audio recorder allowed me to better capture participants' verbal responses while enabling me to concentrate on capturing their non- verbal cues. I played back the audios later reflecting on the teachers' responses more critically. These recordings were transcribed to enable data analysis.

In addition, interviews are also open to inaccurate and dishonest contributions from interviewees (Best and Khan, 2000). I listened tactfully and asked participants to clarify input if there appeared to be contradictory information. If the answers were vague, I, if necessary, probed further to clarify the response. However, I took heed of

Cohen et al.’s (2011) caution that in interviews, the researcher's verbal comments and nonverbal cues can also lead to bias by influencing the participants' answers and may lead to participants giving certain types of responses which might not be true but they feel it is what the researcher wants to hear. Thus, during the study, I avoided giving leading comments and tried as much as possible to maintain a neutral atmosphere, allowing the participants to choose which way they wanted to go. This, I argue, helped to ensure the gathering of truthful, reliable information which reflected the ECD teachers’ understandings and ways of incorporating IK in their pedagogical practices.

Furthermore, Chakraborty (2012) avers that the freedom of semi-structured interviews can lead to the interview session going totally off track since there is the possibility of bringing other ideas or issues to the fore during the interview. To prevent this from happening, I had to ensure that I kept participants focused and pulled them back on track whenever they appeared to be side tracking.

4.5.5 Documentation

In this study, I also made use of documentation which included photographic evidence as well as the analysis of relevant documents. Both will be briefly discussed.

4.5.5.1 Photographic evidence

I took and also asked teachers to take some photographs of images that might capture inclusion of IK in the classroom. Photographs are part of documents that can be generated and used to get an understanding of an issue under study.

> Some example of documents that can be generated for or through the research process are diaries, time diaries, written accounts and stories, biographies, pictures and drawings, charts, tables and lists. Such documents can be generated by you as the researcher, or you can ask people or bodies you are researching to generate them for or with you (Mason, 2002, p.103).

In addition, according to Mason, documents do not necessarily need to be textual. She comments;

> Some documents contain no- text based elements which may be of interest to the researcher (for example, graphics…). Some commentators will include non- text based documents especially photographs in their discussions of documentary methods (p. 103).

With Mason`s ideas in mind, I asked the ECD teachers to take photographs of materials that resemble IK in their classrooms as a way of establishing their understandings of IK. I also took photographs of materials such as charts, timetables and other play materials so as to establish the teachers' understandings of IK and their ECD pedagogical practices. Contrary to the view that photographs provide data during research, there are dimensions of the photographs that are not encapsulated in the idea of 'what the eye can see'. Pink (2001 in Mason 2002) argues:

> Material objects are unavoidably visual, but visual images are not by definition material. Nevertheless, the intangibility of an image that exists as verbal description or is imagined makes it no 'real'… The rupture between visibility and reality is significant for an ethnographic approach to the visual because it implies that reality can not necessarily be observed (p. 103).

This means photographs may not be good to represent reality inform of mental processes, for example, ECD teachers` understandings of IK. However, photographs are key where primary methods are interviews and observations as they fill in where the two have missed.

4.5.5.2 Document analysis

I used document analysis to collect data. Document analysis is the evaluation of all documents on the phenomenon being studied (Magwa and Magwa, 2015). Documents tend to contain data that are thoughtful because adequate time, care and consultation are given to compiling them (Schram, 2003). Thus, in this study, documents were analysed in an effort to locate the place of IK in ECD within the policy documents. They were also used to establish the support given by policy to ECD teachers' incorporation of IK into their pedagogical practices. I analysed the following policy documents:

1. Statutory Instrument 106 of 2005. It focuses on the ECD guidelines and works as the main policy framework. The instrument touches on aspects such as the ECD curriculum, registration of ECD centres and teacher qualification to mention but a few.
2. Director`s Circular 12 of 2005. The circular operationalises the SI 106 of 2005. It gives clarity on how the stipulations of the statutory instruments should be implemented.
3. Director`s Circular 48 of 2007. The circular operationalises the SI 106 of 2005. Its main emphasis is on the role of parents at the ECD centre. It creates a rich ground for the firm relations between the school and the community which can be good for the incorporation of IK into the ECD teachers' pedagogical practices.
4. ECD syllabus 2012. The syllabus gives direction on curriculum implementation. It provides the content, goals, methodology and assessment criteria to mention but a few.

I have analysed the above mentioned documents in section 2.9 because they provide the framework for the roll out of the ECD curriculum as well as provide guidelines for the inclusion of IK in the ECD curriculum in Zimbabwe.

4.6 Ethical Considerations

The researcher considered research ethics in detail while carrying out this research. I adhered to all stipulated research ethics required by the University of the Witwatersrand in carrying out this study. Grix (2010) states that qualitative research intrudes into people`s lives and deals with the most sensitive, intimate and innermost matters of life, hence, ethical issues inevitably accompany the collection of such information. According to Best and Khan (2000), research ethics refer to professional behaviours which are considered right and wrong and are normally guided by the morals of society.

Research ethics can also be defined as a set of standards that protect the participants and the public through informing or guiding the researchers on how they should carry out their study (Yin, 2009). Therefore, research ethics are principles researchers should abide by in carrying out their studies so as to ensure prevention of harm to participants in particular and the general public at large.

Research ethics can also be viewed as being legal and moral expectations of how to carry out a research. These include obtaining informed written consent, ensuring confidentiality and anonymity if possible. It also includes consideration of the cost benefit ratio as well as a debriefing of participants if necessary. All these aspects were attended to by the researcher when carrying out this research.

4.6.1 Ethical clearance

Ethical clearance was applied from the university in 2015. It was granted on 25 August 2015. Its protocol number is 2015ECE005D (see Appendix 9). The topic was improved to "ECD teachers` understandings of IK and how they incorporate it into their pedagogical Practices: A case study of selected schools in Manicaland Province of Zimbabwe" due to further refinements during the research process. However, this did not change the thrust of the study; neither did it change the research instruments.

4.6.2 Informed consent

Before embarking on the study, I sought informed consent from the participants. I informed participants about the research. The research intentions were explained to the participants and how the participants would contribute to the research. According to Ary, et al., (2000) the benefits and side effects of being a participant should be explained to intended participants. Written consent was sought from the ECD teachers, the parents of the children, the children themselves as well as school heads. All adult participants were asked to read the information leaflet and to sign consent forms upon getting explanation from the researcher (see Appendices 5, 6, 7 and 8) for the various consent forms.

ECD children are vulnerable and they are not yet able to read, so I explained to them why I would be in the classroom and asked them complete the pictures on the sheet given to them. They were sked to give their consent by choosing a specific face. If the child consented to participate in the research, he or she chose the smiling face and if he or she disagreed the child was informed to choose a dull or sad looking face. Asking the children to consent to the study enabled me to comply with UNCRC (1989) article 3 and African Charter on the Rights of the Child (1990). These articles advocate for always acting in the best interests of the child. As stated by Bhebhe (2014, p. 59):

> These require that the best interests of the child must be the primary consideration and that those who are capable of forming their own views should have the right to express them freely, commensurate with age.

In addition, parents were also asked to consent on behalf of their children as some would argue that the children are too young to consent on their own. This was done before engaging the participants in the research process, giving them the right to decide whether to take part in the research or to decline participation. In fact, all the participants were told that they could withdraw any time.

4.6.3 Confidentiality

I also undertook to respect participants' confidentiality. Participants have a right to privacy and confidentiality is important in research. Confidentiality calls for the protection of information such as papers, personal records and data provided by the participants (Magwa and Magwa, 2015). In addition, participants are entitled to know how and why their data is being stored, to what uses it will be put and to whom it may be made available (Bhebhe, 2014).

Patton (2002) describes confidentiality can be assured no one has access to the participants' names or data that is in possession of the researcher and that no one can match research information with the participants. I gave all schools pseudonyms, and pseudonyms in form of totems were given to participants (see section 4.6.4).

I also kept the data secure so that no one other than me would have access to it and have undertaken to ensure that the data is destroyed after the study is completed. In the cases where I took photographs, if these photographs were used in the thesis the faces of the participants have been covered to avoid their easy identification. The names and contributions of participants have been kept confidential and are not for public scrutiny (Chakraborty, 2012). This knowledge allowed participants to freely air their views without fear of being exposed.

4.6.4 Anonymity

Total anonymity is impossible in studies where interviews and observation are the main data collection tools. The names of participants will always be known to the researcher. However, the issue of anonymity should also be considered as it is also part of the participant`s right to privacy. Providing anonymity of information collected from research participants means that no one [other than the researcher] can link individual responses with participants' identities (Magwa and Magwa, 2015). On anonymity, the researcher is aware of the participants' true identity (Cohen, et al., 2011).

I did not use participants' real names. I used what I termed the totemic approach to name the participants. A totem is an animal or part of an animal that is believed to be scared (Gumbo and Msila, 2015). According to Ampadu- Agyei (2003, p. 19-20 cited in Emaeagwali and Shizha 2016, p. 68),

> Totems refer to vegetables or animals which are revered by individuals, particularly a group of people or tribe as scared. A totem can be an animal or plant or any other natural object believed to be ancestrally related to a tribe, clan, or family group as tutelary spirit. For this reason, the members do not eat, kill or trap such animals or birds or fish.

If someone belongs to that totem, he/ she can be called by that totem, for example if someone belongs to the "*Moyo*" (heart) totem, he can be called Mr Moyo or Mrs Moyo if married to a man of the *"Moyo"* totem in Shona. Thus, as a Shona cultural practice, I named the participants according their totems. Use of totems did not completely distort the participants` identity as totems are part of the cultural identity of the people. However, because totems are common names and associated with kinship this helped to ensure anonymity of participants, especially as the school names have also been changed. The idea of kinship embedded in totems made it easy for me to form relations as they easily accepted me as one of their relatives based on my "*Shumba"* (Lion) totem.

In order to protect the identity of the schools, I used what I termed the aspirations approach. Nyandiya- Bundy, et al., (2000) suggest that names of children or places were given to show the people`s wishes and these would be wishes for the good. Hence, the schools were named Vambai, Kurai and Tariro meaning begin, grow and hope respectively.

4.6.5 Cost benefit ratio

The researcher also considered the cost benefit ratio. Though what the participants said was considered confidential, if it pertained to someone's safety, like if a participant speaks of, for example, child abuse that would have to be reported to the responsible authorities (Best and Khan, 2000). This means that as endeavoured to uphold the principle of confidentiality during the study, it would not be more important than the value of life that might be under threat. Hence, the need to report when such happens, however, this did not happen during this study.

In addition to safety of people, of importance in research is honesty on the part of the researcher. Data, results, methods and procedures should be reported honestly (Guba and Lincoln, 2005). Data in this research was not fabricated. The researcher's main aim was to establish ECD teachers' understandings of IK and how they incorporated IK into their pedagogical practices. Therefore, falsifying data would not allow for any significant improvements in the teachers` practices. Hence, the importance of ensuring that one has collected accurate information and ensuring that data are correctly presented as well as being properly analysed as it would add value to the study.

After finishing the research, there should be a debriefing. Telling the participants that their role in the research has come to an end and thanking the participants knowing very well the research would not have come through without their support and cooperation (Chakraborty, 2012). Upon completion of the data collection process, I had meetings with participants at their respective schools where I thanked them and told them that the research process was complete. I also offered to share the findings with them.

4.6.6 Negotiating access

After obtaining the ethics clearance from the university, I proceeded to the Ministry of Primary and Secondary Education head office in Harare where I sought permission to enter the schools and do my research. I obtained the letter to carry the study on 22 October 2015 (see Appendix 10). I proceeded to Manicaland Provincial Education Director where I got further clearance on 26 October 2015 (see Appendix 11). These documents allowed me to meet the legal requirements of the study as prescribed by the university, but not to establish a good relationship with my participants. Thus, after the clearance process, I visited the chosen research schools, introduced myself and familiarizing possible participants with the study and invited them to participate.

Relations were formed with the participants through the use of totems. Use of totems is an indigenous way of recognizing and respecting people and their protocols. As said before, totems are believed to have kinship between and among the people sharing them. These relations made it easier for me to be accepted by the participants; hence, sharing information was not too much of a challenge. To support the view Clarkson (1989, p. 16, cited in Carcary, 2009) says “people cannot be understood outside of the context of their ongoing relationships with other people or separate from their interconnectedness in the world.”

4.7 Trustworthiness and Understanding

Validity and reliability are popular terms used in quantitative research. However, in qualitative research, these are equated to trustworthiness and understanding (Gay et al., 2011). Patton (2001) says that trustworthiness and understanding are two factors which any qualitative researcher should be concerned about while designing a study, analysing results and judging the quality of the study. Generally research is considered to be trustworthy by addressing the credibility, transferability,

dependability and confirmability of the studies and findings (Connaway and Powell, 2010).
During the study, I tried to ensure factual accuracy of the accounts by seeking clarity from the participants on responses that seem to be vague. I also sought to confirm from the participants if what I had captured is what they said. I read them the responses captured and asked them to acknowledge if they were true and correct. Thus the study aimed to produce results that are dependable and confirmable. I also tried to interpret behaviours or words said by the participants accurately. This was done by not jumping to conclusions but rather by seeking further clarity from participants where necessary.

I was also alert to participants' body language to assist with the verification of meaning. In an effort to minimise research bias and to encourage teachers to feel at ease in my presence, I observed teachers for at least three times and formed cordial relations with them.

I also planned to immediately stop with data collection if I noticed any teacher or child in the class becoming uncomfortable with the process. Fortunately, this did not happen. According to Patton (2001, p. 14) "the researcher is the instrument and credibility depends on the ability and effort of the researcher". Thus, use of multiple data collection instruments was intended to produce true findings which would yield similar data across the participants. In qualitative research, this does not imply standardization of methods but rather that data generation and analysis has been appropriate to the research questions and has also been thorough, honest, careful and accurate (Punch, 2005). Cohen and Manion (1995) assert that even if two instruments are used, they must produce results that support each other even if they are measuring slightly different issues. Thus, the instruments were chosen to complement each other in exploring the teachers' understandings of IK in ECD and the extent to which they incorporate IK in their pedagogical practices.

4.8 Data Analysis Plan

Data is presented in chapter 5 through a series of case studies. The analytical framework is presented in chapter 6. Tables and pictures were used in chapters 5 and 6 to clarify the presentation of data and to highlight some similarities and differences in the findings. Data were also analysed in themes. Thematic analysis is the process of identifying patterns within qualitative data. Thematic analysis is the basic qualitative method one should learn as “it provides core skills that will be useful for conducting many other kinds of analysis” Braun and Clarke (2006, p. 78). It is an appropriate method for this study because it is flexible as it is not tied to a particular epistemological or theoretical perspective.

Thematic analysis allows the researcher to identify patterns or threads in data that are important and use these to address research questions. This is much more than simply summarising data, but interprets and makes sense of it (Maguire & Delahunt, 2017). The categories of themes were selected based on the literature review, the initial findings and further analysis of these findings are:

1) ECD teachers` understanding of IK.
2) Tensions between indigenous knowledge and pedagogies.
3) ECD policy and IK.
4) Strategies identified by teachers for the incorporation of IK

These themes were analysed through a socio- cultural lens and literature review on what constitutes good ECD practice. Presentation of data was done through written narratives derived from the interviews, observations and document analysis. Narratives play an important role in the social world; they are a form of knowledge and communication as complex situations can be better understood in story format (Czarniawska, 2004; Carcary, 2009). Hence, narratives enabled me to shape various interview stories into a coherent account of important themes.

4.9 Conclusion

This chapter focused on the research methodology. A description of the research paradigm which is qualitative and interpretivist in nature was given. Other research methodology elements such as the research sample and sampling procedure, as well as the research instruments and data collection methods were presented. This chapter further considered data analysis and the research ethics. Chapter 5 presents the findings.

CHAPTER 5

DATA PRESENTATION

5.1 Introduction

The study was carried out at three schools in the Mutare district. Each school and all participating teachers were given pseudonyms to protect their identity. Schools were named Vambai, Tariro and Kurai respectively. These schools were purposively drawn from the urban, peri-urban and rural areas respectively. All the three are primary schools with classes ranging from ECD “A” to grade 7.

This Chapter presents data in the form of three case studies. I begin by presenting an overview of the teachers, their qualifications and years of teaching experience. I then use the case study approach to provide an overview of each school. This overview includes the appearance of each schools and a brief description of the teachers who participated in the study. I describe the classrooms, the layout of furniture and resources followed by a similar description of the outdoor environment. Thereafter, I outline the daily programme followed by an overview of what happens in each class and a description of the interaction patterns between teachers and children. Data collected through survey, interviews and observation, including photographic evidence will be presented.

5.2 An Overview of Teachers’ Qualifications

All ECD teachers revealed that they have a professional teaching qualification. All the ECD have a Diploma in Education (Primary) with specialisation in Early Childhood Development and among them, two of them hold degrees in ECD. One of the school heads has a Certificate in Education and two have a Diploma in Education, but these relate to general education not ECD. In addition, two of the heads have degrees in Administration and one in English. See Table 5.1 for an overview of their teaching qualifications, their years of teaching experience and the names of the schools where they were teaching when this study was conducted.

Table 5.1: Teacher qualifications and years of teaching experience.

Name	QUALIFICATION		Years of experience	School where participant is employed
	Diploma	1st degree		
Mrs Moyo	Diploma in Education (ECD)		3	Tariro
Mrs Shava	Diploma in Education (ECD)		2	Kurai
Mrs Sibanda	Diploma in Education (ECD)		2	Tariro
Mrs Dube	Diploma in Education (ECD)	Bachelor of Education (ECD)	4	Vambai
Mrs Gumbo	Diploma in Education (ECD)		2	Kurai
Mr Hove	Diploma in Education (ECD)	Bachelor of Education (ECD)	5	Vambai
Mr Zhou (Head)	Certificate in Education	Bachelor of Education-Primary (English)	15	Vambai
Mr Sithole (Head)	Diploma in Education (Primary)	Bachelor of Education (Administration and Policy	14	Kurai

		Planning)		
Mr Sigauke (Head)	Certificate in Education	Bachelor of Education (Administration and Policy Planning)	17	Tariro

The findings as previously mentioned are presented as three case studies. I begin with Vambai School because this was where I conducted the pilot study. I then follow with Tariro and finally complete the case studies by presenting the findings at Kurai.

5.2.1 Vambai School

Pilot testing for the research instruments began at this school on the 30th of October 2015 and lasted until the 13th of November 2015. The school was chosen for pilot testing because it is representative of both the rural and urban setting for it is in a peri-urban area. The school is about 40 km from Mutare Central Business District going southwards. It is situated near a thriving township. Vambai is a primary school which caters for children from ECD “A” to grade 7. The walls of the main school buildings are painted blue and yellow. The school is fenced with a perimeter fence but the front side perimeter is a durawall made of brick.

Vambai School has five ECD classes. Its ECD enrolment stands at 263. There are two ECD “A” and three ECD “B” classes. ECD A is a class that caters for children between 3- 4 years and ECD “B” caters for the 5-6 years. The ECD classes have an enrolment ranging from 40- 55 children in each class. There are two small classrooms for ECD shared by the four available ECD classes. The building seems neglected with doors and roof needing some renovations. These two classrooms are used by the ECD “B” classes. In addition to the two classrooms, one ECD “A” class uses the church building for its activities. There is a new ECD two classroom blocks under construction.
Currently, the children at this school do not have adequate classrooms. The available classrooms are inadequate for the number of pupils in the classes. In addition, the windows are very small and too high so that there is poor ventilation

and little natural lighting. A picture of the ECD centre is given in Figure 5.1. As one can see it is not the most inviting of school environments.

Figure 5.1: Vambai ECD centre

The school head, *Mr Zhou,* is a man in his late fifties. He is a holder of a Bachelor of Education degree (primary), specialising in English. However, he does not have experience in ECD. There are five ECD teachers. Of these, one is a holder of a Bachelor of Education degree in ECD, two are Diploma in Education specialising in ECD and two are para- professionals. The teachers have teaching experience ranging from 2- 5 years.

Teachers who participated in the study from Vambai School were named Mr Hove and Mrs Dube. They taught ECD “A” and ECD “B” respectively. Mr Hove has a Bachelor of Education specialising in ECD. He has teaching experience of five years and has also consulted the local community on IK. Mrs Dube is a holder of a Diploma in Education specialising in ECD. She has four years teaching experience in ECD. In the classes I observed, there were 48 children (24 girls and 24 boys) in ECD “A” and 44 children (24 girls and 20 boys) in ECD “B”.

The classroom set-up for ECD “A” (Mr Hove`s) is similar to that of ECD “B” (Mrs Dube`s). The difference is in the arrangement of their subjects on the timetable and the arrangement of play areas.

The children sit on long wooden benches, not chairs around tables as groups. The groups are named one to five. Each group will have between eight to ten children around a table. The benches are low enough to suit the size of the children. The tables are both long and wide so that they occupy a large space. The children sit still for long periods of up to thirty minutes during teacher directed activities. The children in both classes who were between 3-6 years have a relatively short listening span. Children sat on the floor in a horse shoe during circle time. During indoor free play, children were allowed to take the play materials to their sitting positions at the table and play from there.

However, there were a lot of play materials in the classes. These play materials were not well arranged because of shortage of space and this limited easy movement of children during activities such as free play. The indoor play areas have materials heaped in demarcated areas on the floor. The areas are demarcated using bricks covered with newspapers. They included a pre- maths area, a language and book area, as well as an art and craft area, a science and discovery and a dramatic play area that comprised a clinic and zoo area in both classes.

Most of these materials observed in the classroom are to be found in the local community in which the school is situated. Examples of these materials included musical instruments such as drums, shakers, and *“mbira”.* They also had models of animals found in the locality such as hares, monkeys, cattle and buck. Classroom displays were also observed. The classrooms had a lot of charts with materials that showed a western bias. Figure 5.2 is a photograph showing some of the charts seen in the ECD “A” classroom.

Figure 5.2: Charts in the ECD “A” class

The alphabet was also displayed with pictures of objects such as fruits. Fruits that were on display include apples, bananas, and grapes. The number lines were made using the same fruits. Animals such as lion, tiger and giraffe were also on display. Upon interrogation, the teacher explained that these alphabet charts were given by the District Inspectors under a donor funded programme called Early Reading Initiative (ERI). Both teachers and their classes use the same outdoor play area. They alternate their times to go to the outdoor play area.

The ECD outdoor play area is fenced. The outdoor equipment is made from metal. They include items such as a merry- go-round, slides, see- saws, a traffic area and a floating bridge. However, the amount of equipment seemed to be inadequate considering the number of children in the ECD section. Some of the outdoor play equipment such as the see- saws needed to be repaired.

The two teachers who responded to the survey and interview acknowledged that they had heard about indigenous knowledge before. The two ECD teachers and the school head were asked to complete the survey on the 30th of October 2015. Mrs Dube and Mr Hove were interviewed on the 31st October 2015. This was the day the surveys were collected. Mr Zhou was interviewed on the 2nd of November 2015.

Mr Hove who teaches ECD “A” was observed from the 2nd of November 2015 to 6th of November 2015. Observations were made for two to three hours a day. On day one and two, he was observed from 8.00am-10.30 am. On day, three to five, he was also observed from 10.30am-12.30pm. This was done as a way to get more insights into how he incorporates IK in his daily activities. From the observations, it emerged that the teacher used a subject based approach in teaching the ECD children. They both follow the national ECD syllabus and thus have a similar. Table 5.2 represents the schedule of observations done for Mr Hove.

Table 5.2: A schedule of observations for Mr Hove

Date	**Activity 1**	**Activity 2**	**Activity 3**
02/ 11/ 15	News and stories 0800- 0830	Language Arts 0830- 0900	Indoor free play 0900- 1000 am
03/ 11/ 15	News and Stories 0800- 0830	Maths and Science 0830- 0900	Indoor free play 0900- 1000 am
04/ 11/ 15		Expressive Arts 1100- 1130	Outdoor free play 1130- 1230 pm
05/ 11/ 15		Social Sciences 1100- 1130 am	Outdoor free play 1130- 1230 pm
06/ 11/ 15		Technology 1100- 1130 am	outdoor free play 1130- 1230 pm

During the activities, I observed Mr Hove incorporating some aspects of IK. When he was teaching Maths- Science (03/ 11/ 15) on the sources of water children identified the sources of water found around the school such as *“Chitubu”* meaning spring. In his Language Arts and Social Science lessons, Mr Hove made use of Shona more than English. He used rhymes or lullabies such as *“Ehuwe nyarara mwana”* which is a lullaby used for baby- sitting. He used the lullaby as he was teaching of the roles of family members with one being caring for the young ones. On 02/ 11/ 15 during the Language Arts discussion, the children took turns to do *ngano (folk stories)*, most popular was *“Chivhu tiza mvura” and “Tsuro naGudo”.*

Mr Hove wrote (30/ 10/ 15) that he uses IK very often, mostly during teacher directed activities. To support his claim, he stated that he engages ECD children in traditional Shona games such as *Kadeya- deya, Dunhu, Chibata Mabvi, Dudu muduri,* folk tales *and mahumbwe (make belief play*). He confidently acknowledged that since the beginning of his teaching career in 2010, he has used IK. He said that as children play games like *Dudu muduri* they will be developing pre-maths or number skills such as counting. Further elaborating, he mentioned that children can use wild inedible fruits found in their locality to play games and that they enjoyed playing games such as *“nhodo”* thereby developing fine motor skills as they throw and catch.

To corroborate his view, during the interview (31/ 10/ 15), where he appeared to be confident and relaxed, Mr Hove said that he used IK in his lessons very often as he believes that children learn better in a familiar context and from the known to unknown. He said that he used IK in terms of media, content and methodology. However, he bemoaned the limitation in the use of IK caused by the current ECD policy which he believes emphasises the use of English and other Western knowledge. Perhaps to demonstrate his dissatisfaction with the current policy he used Shona more than English during teaching while I was observing in his classroom.

The teacher suggested that IK is not adequately included in most ECD classrooms. He highlighted that because formal ECD programmes started abroad in Western countries, they have also provided suggested activities and media. This he felt has influenced various institutions to admire the Western approach and knowledge, for example, the toys used are mostly commercial and Western oriented. To justify his assertion, in the interview, Mr Hove also said,

> the education system is too examination oriented and the teachers are forced to use English and embrace western knowledge which has examination bias. This has influenced our ECD centres to admire the western style and knowledge. This has also killed the ECD teachers' creativity and compromised on their ability to use IK (31/10/15).

In the survey, Mr Hove acknowledged that, he also got to know about IK from the Teachers` College when he was training to become a teacher. He wrote that he heard about IK at Great Zimbabwe University during a Philosophy lecture on African Traditional Education and he reiterated this in the interview. He further elaborated in the interview that *IK "is the knowledge that children acquire from the local environment for their survival in later life"* (31/10/15).

In the survey Mr Hove also wrote (30/10/15) that they are not guided by policy on the use of IK. To him, the policy is not useful in guiding the inclusion of IK in ECD as the approaches used mostly are Eurocentric and natives are diverted from IK. He said "*the ECD policy does not embrace Indigenous knowledge; instead it focuses on the pupils to meet the international standards"* (31/10/15).

Mrs Dube was observed from the 9th November 2015 to 13th of November 2015. Observations were made for two to three hours a day for five days. On days one to three she was observed from 10.30am-12.30pm. On days four and five she was observed from 8.00am- 10.30 am. Again these observations were done as a way to obtain more insights into how she incorporated IK in her daily activities. Observations findings were similar to those of Mr Hove as they were guided by the same ECD policies. The differences were mainly related to the arrangement of subjects on the timetable. Table 5.3 outlines a schedule of observations done for Mrs Dube.

Table 5.3: A schedule of observations for Mrs Dube

Date	**Activity 1**	**Activity 2**	**Activity 3**
09/ 11/ 15		Expressive Arts 1030- 1100am	Outdoor free play 1100- 1230
10/ 11/ 15		Social Sciences 1030- 1100 am	Outdoor free play 1100- 1230

11/ 11/ 15		Language Arts, 1100- 1130	Indoor free play 1100- 1200
12/ 11/ 15:	News and stories 0800- 0830	Technology 0830- 0900	Outdoor free play 0900- 1000
13/ 11/ 15	News and stories 0800- 0830	Maths and Science 0830- 0900	Indoor free play 0900- 1000

During observations for Expressive Arts activities on the 9th of November 2015, the teacher engaged children in traditional games such as *"Nhodo", "Pada", "Raka raka", "Dunhu", "Zai rakaora"* and "*Mapere"*. On the 12th of November 2015 during Technology activities, the teacher seemed to concentrate only on the aspects of the computer such as its parts and uses.

In an informal discussion after the activities, she said that there was a challenge in teaching Technology. IK cannot be incorporated since the subject only places an emphasis on the computer parts ignoring other forms of technology such as other tools used to made work easier. In the survey, Mrs Dube wrote (30/10/15) that she used IK very often. To corroborate the assertion, the teacher acknowledged that she uses traditional Shona games during teaching and learning in ECD. She explained that she uses the games in all the stages of the teacher directed activities which are introduction, lesson development and concluding activities. However, I observed that this did not really happen as the teacher would resort to a more didactic lecture method at some stage of the lesson especially during lesson development. Mrs Dube added "*I engage the ECD children in games like "Pada", "Nhodo", "Sarura wako", and "Zai rakaora".* She further elaborated,

> ...these traditional games help to develop the whole child (PIES) meaning physically, intellectually, emotionally and socially. More so, they gain these enjoying themselves using the language they best understand (31/ 10/ 15). [meaning children develop holistically as they play using the language they best understand].

She also agreed to the use of Shona folk stories. She gave examples of traditional folk stories as *"Tsuro naGudo", "Tsoko naGarwe" and "Chivhu"*. Justifying the usefulness of IK, the teacher took the economic lenses and said that it was cheaper as it focused on locally available skills and materials to use. In her elaboration she asked, "*Why should we go far and wide looking for knowledge when we have reservoirs around us."* Upon further interrogation, she became evasive and could not really clarify what she meant.

In the survey, the teacher wrote (30/10/15) that IK is adequately used in ECD. In support of her view, in the interview, she said, "*Teachers adequately use IK in their ECD activities and they draw this knowledge from their communities."* Mrs Dube argued that since indigenous knowledge draws on local resources, teachers make use of locally available materials drawn from the children`s cultural background, for example, *"makavhu"* to make shackers.

Mrs Dube wrote that she had heard about IK during her studies both at the Teachers` College and University. In the interview, Mrs Dube confidently declared that she is aware of IK and is knowledgeable about it. She said,

> I heard and learnt about IK both at college and the University. I heard a bit of it at college and more detail at the university. However, I still feel I need to know more about IK for there is much talk about it in the Zimbabwean education system, let alone ECD (31/ 10/ 15).

She mentioned that she had four years teaching experience in ECD and further highlighted that she had just completed her Bachelor of Education Degree in ECD. The teacher defined IK as the local or traditional knowledge of a people. She further elaborated that IK can be found in fields such as Agriculture, Health, Education and Child rearing practices.

In the survey, Mrs Dube also acknowledged that she is guided by the ECD policy on the use of IK. Corroborating her response in the interview, she said, "*Yes I am guided by the ECD policy in using IK in ECD."* However, upon further interrogation, the teacher professed ignorance on how the ECD policy informs the use of IK.

The school head, Mr Zhou`s responses were also informative. He wrote that his teachers used IK often. He mentioned that he had observed them several times using IK in their teacher directed activities. To support this assertion, the Head, during the interview, said that the ECD teachers use traditional games during teaching and learning (play) in ECD. He highlighted well known traditional games such as *"Dudu- muduri", "Pada", "Musha unendarira" and "Tsoro".* He also agreed that the ECD teachers use traditional Shona songs and rhymes. However, the examples, given were in themselves confusing as he reiterated the games already mentioned. These are not songs but rather a mixture of game songs and games without song. The Head further stated that the ECD teachers used Shona folk stories during teacher directed activities. He gave an example of the popular characters *"Tsuro naGudo"*.

However, he could not actually name specific stories. The Head concurred that IK is useful in ECD. To justify his position, he pointed out that IK gives relevance to what the children are taught in ECD. He added that the children become culturally knowledgeable after going through a learning process. Thus, children do not become strangers in their environment.

The School Head wrote that IK is not adequately used in ECD. He said that the ECD teachers seemed to lack knowledge on IK. Earlier on the Head said teachers use IK but later he goes to the contrary. This may suggest that the Head is not sure of what he calls IK and it points to lack of understanding on his part. This explains their limitation in their ability to use IK in ECD.

Mr Zhou also wrote (30/ 10/15) that he had heard about IK before. He reaffirmed this assertion in the interview when he stated, *I have heard about IK before in the academic fora*. However, in both responses, he did not elaborate on the nature of the academic fora he had referred to. He just said that he got to know about it in meetings. To him, IK is native knowledge found in nature or communities. The nature and communities were not elaborated on.

In both the survey and interview, Mr Zhou mentioned that the ECD policy is usefully guiding practice on the use of IK in ECD. However, no elaboration on the response was given. He said, "*I believe teachers are guided by the ECD policy in incorporating IK in ECD*." Upon further interrogation, he professed ignorance of the ECD policy. He said,

> I don`t have details of the policy, I did not have time to read it because I am too busy. As you can see this school is too big. In fact it [ECD] is an area under the control of the Teacher- In- Charge so I believe she also knows the policy (02/ 11/ 15).

The Head showed signs of discomfort as he continuously fidgeted with his voice almost raised to show emotion.

Mr Zhou suggests that IK should be incorporated across the broad ECD curriculum. He said "*ECD teachers should use IK for motivation of learners. However, they should not over dwell on it since it does not prepare the children for the competitive global life and experiences*" (02/11/15). He further argued that it will give knowledge, identity and an afro-centric flavour and view to ECD children.

Based on these research findings I reviewed the research instruments. I found them to be satisfactory and so used them in an unaltered form to complete the collection of research data.

5.2.2 Tariro School

Tariro School was drawn from a low density suburb of the town. It is also found near the central business district of Mutare. It is a former group "A" school which was reserved for the whites and coloured children only prior to Zimbabwe`s independence. The school head Mr Sigauke is a man in his late fifties. He is a holder of a Bachelor of Education degree in Administration and Policy studies. Tariro is a primary school which caters for children from ECD "A" to grade 7.

This is a spacious school. It is well-kept and appears to offer an agreeable learning environment. It is a secure premise, being fenced off with a perimeter fence. There are three ECD classes at the school distributed as one ECD "A" class which caters for the three to four year old children and two ECD "B" classes that cater for those between ages five and six. The ECD classrooms and the outdoor play area have recently been refurbished. The classrooms look inviting from outside as they are well painted in colours of blue and yellow (see Figure 5.3). There are various pictures drawings on the walls that represent various objects. However, like Vambai, the ECD classrooms are not big enough to allow for free movement of the children. The building was not initially constructed as a classroom. After the introduction of ECD it was later renovated as a way of trying to accommodate the ECD classes. Thus they are not to standard size classrooms.

Figure 5.3 Tariro ECD centre

Next to the ECD centre, there is a cultural hut which is grass thatched and found near the outdoor play area. However, as depicted in the photo of the hut (see Figure 5.4), there is tall grass around it indicating that maintenance of the area is limited.

Figure 5.4 Cultural Hut at Tariro ECD centre

In the cultural hut, there are playing materials such as *"duri", "guyo"* and traditional dress up materials such as *"ngundu"*, and old clothes. In fact, the school is well resourced in terms of learning materials in its ECD centre. From the observations made, there are a variety of teaching materials drawn from both the local communities and Western based materials. The long grass around the hut suggests that it is not opened for use very often.

The outdoor play area has play equipment such as see- saws, swings, and sand pit to mention but a few (see Figure 5.4). Both the school and the outdoor play areas are fenced ensuring a safe play environment for the children.

The ECD classes have an enrolment of between 25 and 32 children. All children wear the same uniform. Boys wear khaki shorts and shirts, long grey stockings and black shoes. Girls wear navy blue dresses with white checked collars, long white stockings and black shoes.

The three ECD teachers are all female and are all qualified ECD teachers. The ECD class “A” teachers holds a Diploma in Education specialising in ECD. Two ECD “B” teachers also have a Diploma in Education specialising in ECD. These two teachers are pursuing their studies to obtain a Bachelor of Education Degree in ECD. The ECD teachers have teaching experience ranging from three to five years. These are Mrs Moyo and Mrs Sibanda. I observed Mrs Moyo and Mrs Sibanda from ECD “A” and ECD “B1” classes respectively. The two teachers have ECD teaching experience of three and two years respectively.

The ECD activities follow a half day programme. They start at 0800am and end at 12:30 noon. Various subjects are taught under teacher directed activities. See Table 5.4 showing the weekly timetable.

Table 5.4: The weekly ECD timetable at Tariro School

ECD TIME TABLE

TIME	8;00 - 8:30	8:30 - 9:00	9;00 - 9:20	9:20 -9:40	9:40 - 10:00	10:00 - 10:30	10:30 - 10:50	10:50 - 11:10	11:30 - 11:50
MONDAY	ARRIVAL/HEALTH CHECK	TOILET ROUTINE	MATHS AND SCIENCE	FREE PLAY	TECHNOLOGY	B	EXPRESSIVE ARTS	OUT DOOR ACTIVITY	TYDING UP AND DISMISSAL
TUESDAY	ARRIVAL/HEALTH CHECK	TOILET ROUTINE	FREE PLAY	SOCIAL SCIENCE	MATHS AND SCIENCE	R	LANGUAGE ARTS	STORY TELLING	TYDING UP AND DISMISSAL
WEDNESDAY	ARRIVAL/HEALTH CHECK	TOILET ROUTINE	LANGUAGE ARTS	EXPRESSIVE ARTS	FREE PLAY	E	SOCIAL SCIENCES	RYHMES	TYDING UP AND DISMISSAL
THURSDAY	ARRIVAL/HEALTH CHECK	TOILET ROUTINE	SOCIAL SCIENCES	RYHMES	TECHNOLOGY	A	EXPRESSIVE ARTS	FREE PLAY	TYDING UP AND DISMISSAL
FRIDAY	ARRIVAL/HEALTH CHECK	TOILET ROUTINE	RYHMES	MATHS AND SCIENCE	LANGUAGE ARTS	K	OUT DOOR ACTIVITY	OUT DOOR ACTIVITY	TYDING UP AND DISMISSAL

ANALYSIS

MATHS AND SCIENCE	3 X 20 mins.
LANGUAGE ARTS	3 X 20 mins.
EXPRESSIVE ARTS	3 X 20 mins.
SOCIAL SCIENCES	3 X 20 mins.

TECHONOLOGY	2 X 20 mins.

The timetable confirms the use of the subject based approach in ECD. However, this approach is not ideal for the ECD play pedagogies. At times children are expected to sit still on the benches for longer periods as much as forty minutes during teacher directed activities. Such practice does not resonate well with DAP that advocates for the consideration of children`s needs and interests (Bruce, et al, 2010; Bredeekamp and Coople, 1997; NAEYC, 2009). The timetable thus limits the inclusion of IK into ECD teachers` pedagogical practices.

The three respondents, the Head and two teachers were invited to complete the survey on the 12th of November 2015. Mrs Moyo and Mrs Sibanda were interviewed on the 13th of November 2015. I collected all the three completed survey when I went to interview the teachers. Mr Sigauke was interviewed on the 16th of November 2015. All participants acknowledged that they have heard about indigenous knowledge before.

Mrs Moyo was the first to be observed. There are 32 children in her class (18 girls and 14 boys). The children are aged between five to six years. I observed this class from the 16th of November 2015 to 20th of November 2015 for two-three hours a day. On days one and two she was observed from 8.00am- 10.30 am. On days three to five she was observed from 10.30am- 12.30pm. I planned the observation schedule this way in order for me to observe some aspects of the entire daily programme but not to be in the classroom for too long a period as I felt this might become overwhelming. Varying the times allowed me to get a deeper insight into how she incorporated IK in her daily activities.

From the observations, it emerged that Mrs Moyo used a subject based approach in teaching the ECD children. The curriculum areas taught in ECD are Expressive Arts, Language Arts, Maths and Science, Social Sciences and Technology (see Table 5.5). The abovementioned curriculum areas are always taught as teacher directed activities. Below is a schedule of observations done in this classroom.

Table 5.5: A Schedule of Observations for Mrs Moyo

Date	Activity 1	Activity 2	Activity 3
16/ 11/ 15	Language Arts 0800-0830	Indoor free play 0830- 0900am	News and Stories 0900-0930
17/ 11/ 15	Maths- Science 0800-0830	Indoor free play 0830- 0900 am	News and Stories 0900- 0930
18/ 11/ 15		Expressive Arts, 1100- 1130	Outdoor free play 1100- 1200
19/ 11/ 15:	Social Sciences 103000- 1130	110030- 1130	Outdoor free play 1130- 1200
20/ 11/ 15	Technology 1100- 1130		Outdoor free play 1130- 1200

During the activities, the teacher incorporated some aspects of IK. As she was teaching Maths- Science (17/11/15) on the sources of light, she demonstrated *"kusika moto"* meaning making fire using *"Mutsubvu"* sticks which is a traditional way of fire making and is used as a substitution for matches. In the Language Arts (16/11/15) and Social Sciences (19/11/15), Mrs Moyo would make use of English more often than the mother language which is Shona yet the mother language is the vehicle through which IK can be most easily transmitted to the children. She used very "English" type rhymes such as *"I am a little tea pot".* During the interview, the teacher disclosed that though the policy states that ECD activities should be done in the language best understood by the child, it is the school policy to use English from ECD up to grade 7 and this was corroborated by the Head in the interview.

Classroom displays were also observed. The classroom had a lot of colourful charts with materials that showed a western bias. For example, the alphabet chart was displayed with pictures of objects such as fruits. The fruits that were displayed included fruit such as apples, oranges, and grapes which are not necessarily commonly found in the area. Another unfamiliar object seen on the alphabet chart is the quail bird. The alphabet charts are provided by the funders, the same situation as Vambai. The alphabet chart had no letters or words on it as shown in Figure 5.6. It merely shows objects beginning with each letter of the alphabet. Alphabet charts are used to support the notion of a print rich environment. However, because there are no letters on each picture, the effectiveness as an alphabet chart is questionable.

Figure 5.5 Part of the ‘alphabet’ chart

The number lines were made using the same fruits as the alphabet charts. Animals such as lion, tiger and giraffe were on display. The animals are not found in the area, rather they are found in game parks.

The indoor play areas have materials heaped in demarcated areas on the floor as is the practice at Vambai School. The areas are demarcated using empty cool drink cans. There are many different play areas. These were a Pre- maths area, a Language and Book area, an Art and Craft area, a Science and Discovery and a Dramatic area where there was a Clinic and a Zoo area. At the Language and Book area, there were some improvised books with different pictures and patterns, and also plain white paper, pencils and crayons used for drawing. At the Art and Craft area, there were some blank papers, brushes and paints. At the Zoo area, there were models of various animals such as lion, snake, frog and other wild animals.

The children sit on chairs around tables in groups named after animals namely, tiger, lion, elephant, and giraffe. Upon further probing, Mrs Moyo stated that she used animals like tiger that are not even found in Africa because they are fierce and she used this name as a motivation tool for the children. However, she could have used animals found in Africa such as buffalo or leopard for they are also fierce. Chairs are child sized but the tables are both long and wide and occupy a large space. The children heap their bags along the walls on the floor for there are no shelves. It was observed that the children also end up stepping on the bags as they move around the walls. The children sit still for long periods of up to thirty minutes listening to the teacher during teacher directed activities. The teacher uses concrete media and the lessons become interactive mid- way. Mrs Moyo conducted these "lessons" as whole class activities with children sitting at their tables. There is no space for circle time. During indoor free play, children, take the play materials to their sitting positions and play from there. Again this is similar to Vambai school.

On the 16th of November 2015, the teacher was observed using traditional games such as *"nhodo"* while she was doing pre- writing skills such as top to bottom and left to right orientation in Language Arts. As corroboration to the responses from the survey she cited "*Hwai hwai huyai kumusha"* as an example of the game they engaged in. In addition, in the interview, she cited "*nhodo", "pada"* and "*dunhu*" as the games ECD children enjoyed during their activities. In the Maths and Science lesson, she used the both traditional rhymes and English rhymes such as *"1, 2 buckle my shoe"*. She used the Shona rhyme "*Vashanu mumhuri"* meaning five in a family as she introduced number concept.

This corroborated what she wrote in the survey that she makes use of traditional games when engaging in teacher directed activities. She went further to say that she used traditional games when introducing and concluding activities and this was seen in observations. She also said that she used traditional games during outdoor play activities which are more physical in nature. In the interview, Mrs Moyo says,

> I often use IK in the form of games, song, rhymes and stories. This IK has been useful to me as I choose content for my teacher directed activities and also introducing and concluding the activities (13/11/15).

She also said that she used the games during outdoor play activities which are more physical in nature. She gave examples of the songs and rhymes as *"Madhadha mashanu" and "ndatengerwa hembe hona ndachena.*"

On the 19th of November 2015, I observed the teacher giving a Social Sciences lesson using the story of *"Cindrella"* which is a fairy tale of Western origin. However, Mrs Moyo also mentioned that she uses traditional Shona folk stories during activities in her responses both to the survey and the interview. She gave examples of stories such as *"Mufudzi", "Tsuro naGudo" and "Gunguvo naNjiva".* In her justification on the usefulness of IK, the teacher said that it catered for the background of the child which is entrenched in his or her culture. However, no further elaboration was given by the respondent despite my probing.

Around mid- morning, children would go for outdoor free play. The teacher would allow the children to choose their areas of play. Some children would play on swings, the see- saws and in the sandpit. However, it was mostly boys who would go for climbing as the girls would chose to sit down and play games such as *"nhodo", "pada",* and *"dunhu"*. The teacher would be seen monitoring and sometimes assisting those who have difficulty performing activities or comforting those crying.

On the teachers` ability to use IK, Mrs Moyo is of the opinion that IK is not adequately used by ECD teachers during ECD activities and she acknowledged that she does not use it adequately herself. She argues that IK is used more in rural ECD centres as those in town value English much more and have a high regard for western knowledge. In the interview, she elaborated saying,

> IK is not used adequately in ECD. I strongly feel most teachers` lack in content because the deployment of the teachers is too random and they mostly teach in new areas they don`t have knowledge of the culture (13/11/15).

She further suggests that IK is used more in rural ECD centres as those in town value English too much and have a high regard for Western knowledge. She said *"It is debatable if those from urban areas have IK".*

In both the interview and the survey Mrs Moyo mentioned that she had heard about IK before. She said that she heard about IK at the College. In the interview, she says:

> lecturers would constantly refer to the use of IK when teaching in ECD without clearly elaborating what it is and how it can be used". She went on to say, "because of this I cannot confidently say I am knowledgeable about IK (13/ 11/ 15).

However, she defined IK as teaching and learning using the local language. Thus, to her, IK refers to the home language.

The teacher wrote that they are guided by policy in the use of IK. However, she argues that it depends on the environment and the ECD centre as the policy is optional. This was corroborated in the interview as Mrs Moyo says *"As teachers, we are guided by the ECD policy in the use of IK but it is precise* (clear) *because it depends with the environment"*. She goes further to say that the policy assists them in guiding on the use of IK in ECD but did not give clarification despite some further probing.

The other teacher from Tariro who participated in the study was Mrs Sibanda. Mrs Sibanda was a holder of a Diploma in Education with specialisation in ECD and had 4 years teaching experience in ECD. She is currently pursuing a Bachelor of Education degree specialising in ECD on a part time basis. Mrs Sibanda was observed from the 23rd of November 2015 to 27th of November 2015. She was also observed for two to three hours per day. On days one and two observations were done from 10.30am- 12.30pm and on day three to five from 8.00am- 10.30 am. A schedule of observations done for Mrs Sibanda is provided in Table 5.6.

Table 5.6: A schedule of observation for Mrs Sibanda

Date	**Activity 1**	**Activity 2**	**Activity 3**
23/ 11/ 15	Expressive Arts 1030- 1100	Indoor free play 1100-1130	News and stories 1200-1230
24/ 11/ 15	Social Sciences 1100- 1130	Rhymes 1130- 1200	News and Stories 1200- 1230
25/ 11/ 15	Technology		Outdoor free play

	0800- 0830		0900- 0930
26/ 11/ 15	Language Arts 0830- 0900		Rhymes 0930- 1000
27/ 11/ 15	Maths and Science 0800		Outdoor free play 0930-0930

The classroom environment was similar to that of Mrs Moyo as they both use the subject based approach as prescribed in the ECD syllabus and because they work in the same school with a similar culture. The difference, like with Vambai was with the arrangement of their subjects on the timetable. Mrs Sibanda is teaching ECD class A which has children aged between three and four years. There are 30 children (15 girls and 15 boys) in the class.

The classroom was similar to that of Mrs Moyo. In addition, there was a fantasy kitchen area. The kitchen area was equipped with real old and disused cooking utensils such as an electric stove, plates and metal pots. The zoo areas for both classes had, as previously mentioned, mostly the big five animals and other animals found in game parks such as the zebra and antelopes. This class used the same outdoor play area as Mrs Moyo. However, they alternate the times for outdoor play.

On the 23rd of November 2015, she (Mrs Sibanda) was observed doing an Expressive Arts activity. The children were asked to mould animals that are not common such as tiger, giraffe and lion using artificial dough. On the 25th of November 2015, in a Technology activity, she focused on the computer, as the only gadget that makes work easier. On the 24th of November 2015 and 26th of November 2015 the teacher was observed doing rhymes with the children. Some rhymes that were done were *"Twinkle, twinkle little star", and "Baa Baa black sheep"*. The rhymes were mostly English. The few done in Shona were a mere translation from English. During story time, the children remain seated in their places in their groups. The children played games that were similar to those played by Mrs Moyo`s class, for example, *"Hwai Hwai huyai kumusha"*.

In the survey, Mrs Sibanda wrote (12/ 11/ 15) that she used IK very often. In addition to this assertion, she wrote that she uses traditional games during teaching and learning (play). To support her claim, she said in the interview, "*I always use IK in my lessons. There is no way you can have successful activities without using IK."* Mrs Sibanda stated that the use of traditional games helps children to be aware of traditional norms and values. She justified the use of IK in ECD by saying that IK forms the base for teaching and learning. To her it bridged the gap between home and school and this enabled her to incorporate an important early learning principle that states children should be taught from the known to unknown.
She added,

> I use IK because it makes learning relevant to the ECD child. Children do not do well because they are taught things that are far-fetched which is not the case with IK. I engage in local games which are not alien to my learners such as "Chamuhwande- hwande", "Sarura wako" and "Gumbi- gumbi (13/ 11/ 15).

Mrs Sibanda also wrote that she used the Shona traditional song and rhyme in teaching and learning in ECD. She gave examples of the some of the song she use as "*Sadza mbodza rabikwa na Fiona" and "Dzinomwa munaSave".* In the interview, the teacher also agreed to the use of traditional Shona folk stories in her lessons. She said *"I use traditional stories such as "Tsuro naGudo vachinoba mukaka" and "Chivhu tiza mvura". Both I and the ECD children draw our lessons from these and we enjoy them so much".* I observed that she also use the traditional stories in her lessons.

According to Mrs Sibanda, IK is adequately used in ECD. In the interview (23/ 11/ 15), she stated, "*Yes, IK is used adequately and it dominates most of the ECD activities in the form of song, rhymes, games and stories."* However, she suggested that IK could be better handled by properly trained and qualified ECD teachers who are very few in the schools as most ECD classes A and B are taught by paraprofessionals in Zimbabwe (see chapter 2, section 2.9.2). The teacher further pointed out that foreign knowledge has affected most of the teaching and learning field as teachers use English more in their activities and mostly use teaching and learning materials with a western bias, thereby compromising the teachers' ability to use IK in ECD.

Mrs Sibanda wrote (12/ 11/ 15) that they are not guided by the ECD policy on the use of IK and to substantiate her sentiments, she said that the policy merely states that the language best understood by the child can be used in teaching. To corroborate her point, in the interview, she said,

> I am not guided by the ECD policy because I have not seen where it focuses on IK. Actually the Statutory Instrument 106 of 2005 is pro-western in nature and is not very elaborate on what is to be learnt in ECD (13/ 11/ 15).

To her, issues other than language are not discussed. Thus, there is no mention for IK in the policy.

The school head, Mr Sigauke, defined IK as the traditional knowledge passed from generation to generation and said it is part of a people`s culture. Mr Sigauke wrote (12/11/15) that he had heard about IK through a number of sources. During the interview (13/11/15), he said, "*I heard about IK through interaction with society, readings and from my studies both at the teachers` college and the University.* According to Mr Sigauke the ECD teachers often used IK in their lessons. He said during the interview that he had observed teachers using IK several times during teacher directed activities. To substantiate this claim, he mentioned that the teachers make use of traditional song and games such as *"Dudu muduri" and "Sarura Wako".* However, these are not pure songs. Rather, they are game songs.

He also mentioned that ECD teachers use of Shona folk stories in lessons. Mr Sigauke named popular folklore stories such as the Hare and baboon which in Shona is called *"Tsuro naGudo."* The Head pointed out that IK is embedded in the child`s culture and mother language, therefore it limits communication barriers. According to Mr Sigauke, ECD children easily master the concepts and skills for they are covered in a familiar language.

Mr Sigauke wrote that generally, IK is not adequately used in ECD and during the interview, he expanded on these ideas. He stated that,

> Of course there is an ECD policy in operation giving some ECD guidelines. Unfortunately, I do not remember anywhere in that policy

> where it focuses on IK, so I cannot say teachers are guided by policy on the incorporation of IK in ECD (13/11/15).

He further stated that the policy had no detail on how to incorporate IK in ECD, neither is there any detail of appropriate IK content. He was of the view that the modern teacher is not well versed with an understanding of IK due to cultural dynamism or change from one generation to the next and a lack of pedagogical innovations which results in ECD teachers having difficulties incorporating IK in lessons. The School Head suggested that the ECD policy does not guide practice on the use of IK.

Mr Sigauke also suggested that teachers should exploit the richness in IK to develop concepts in ECD children. By this he meant that IK is very valuable and children can learn a lot if IK is incorporated in the ECD curriculum. To support his point, he said in the interview that,

> teachers should exploit the richness in IK to develop concepts in ECD children. The ECD children learn a lot from IK as it is relevant to their culture and makes learning meaningful to them (13/ 11/ 15).

Contrary to his earlier assertion, Mr Sigauke, stated that ECD is consuming resources which could be better used for other pressing issues. He said that resources should be channelled towards programmes such as “Pulling up the lag” (PLAP) which is a remediation programme in schools. Mr Sigauke might have said this because he attended school when ECD was not part of the education system and he does not see its value. He may also not be well versed in play pedagogy, hence, he does not see its educational value as most views play as a pastime activity.

5.2.3 Kurai

Kurai School was drawn from the rural area. It was also found near a township in Mutare district. It was under the authority of the rural district council.

The school head, *Mr Sithole* was a man in his early sixties. He held a Bachelor of Education Degree in Administration and Policy studies. There were four ECD teachers and all were female. Three of them were qualified and one was a paraprofessional. In the ECD class “A” the one teacher who was a participant Mrs Shava had a Diploma in Education, specialising in ECD and the other had a paraprofessional certificate. The two ECD class “B” teachers were both holders of the Diploma in Education specialising in ECD. The three Diploma holder teachers were pursuing their studies to obtain a Bachelor of Education Degree in ECD. The ECD teachers have teaching experience ranging from 2-7 years.

Kurai, a primary school catered for children from ECD “A” to grade 7. The school was not very big in terms of its total enrolment and infrastructure. There were four ECD classes at the school. There were two ECD “A” classes which catered for the three to four year olds and two ECD “B” classes that catered for children between five to six years.

The ECD classes have an enrolment of between 45 and 55 children per class. The children all wear the same uniform. Boys wore maroon shorts and shirts. However, it seems there was no prescription on the foot wear as children were seen wearing shoes of different colours and types with or without stockings. Girls wore maroon dresses with white stripped collars. The footwear situation was the same as the boys. Some even walked bare foot. Upon interviewing Mr Sithole (the school head), he mentioned that the community was poor as such the school was not strict on the uniforms since some parents could not afford to buy certain types of shoes.

This was a spacious school and appeared to be well-kept. It offered an inviting learning environment. However, it was not a very secure premise being fenced off with barbed wire which needed attention in some areas. The ECD classrooms and the outdoor play area have recently been refurbished. The classrooms looked inviting from outside as they were well painted in black and yellow. Pictures of animals like baboons and people playing *Jaka* a traditional dance were visible on the outside walls (see Figure 5.6).

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Figure 5.6 The ECD centre at Kurai School

However, there are only two ECD classrooms. Classes take turns to use the classrooms. Some classes started in the classroom from 8am to 10am and then they exchange places and those who were outside came indoors and vice versa.

Next to the ECD, there is a cultural hut. The cultural hut is built of wood. The roof comprises grass thatch (see Figure 5.7). The cultural hut is found near the outdoor play area. In the cultural hut, there are some traditional play materials such as *guyo, huyo, duri mutswi*, clay pots and *zvidhava* (goat skin for sitting). Around the cultural hut, there are some millet, sorghum and rapoko crops grown. There is also a fowl run next to this hut. It is built of brick and thatched with tin materials. In the fowl fun, some pigeons are kept.


Figure 5.7: The Cultural Hut at Kurai School

The outdoor play area has some play equipment like see-saws, swings, floating bridge and sand pit. Some of the equipment is not painted and that which is painted resemble poor workmanship. The outdoor equipment is made of wood and it does not look inviting (see picture of Kurai ECD centre with its outdoor equipment- Figure 5.6).

The outside area around the culture hut showed that the children make use of this area frequently – it was very well trodden. This observation was confirmed by the ECD teachers Mrs Shava and Mrs Gumbo. These two teachers are holders of a Diploma in Education specialising in ECD. They both have ECD teaching experience of two years. The ECD teachers concurred that the children mostly use the culture hut during the outdoor play periods as they engaged in fantasy play.

Classroom displays were observed. The classroom had a lot of charts. The alphabet and the number line were similar to those observed at Vambai and Tariro schools (see Figure 5.5). Mrs Shava hinted that the alphabet was given to them as a directive from the District Schools Inspector (DSI). Indoor play areas had materials put on the floor in demarcated areas. The areas were demarcated with bricks covered with newspapers.

The play areas in the classroom included pre- maths, language and a book area. There was also a dramatic play area comprising a clinic and zoo as well as a music, dance and movement area, a science and discovery and an art and craft area. Mrs Shava stated that the children used the culture hut as the kitchen area. In one area there were models of objects moulded by children using clay soil. Children moulded animals like cattle, goats, tortoises and hare. In the dramatic play area, there were some dress up clothes like *"mhapa and shashiko"* (animal skin dress), "*ngundu"* and *"manyatera".*

The children sat on long wooden benches around tables as groups during teacher directed activities. Each group had 8 children around the table, sitting four aside facing each other. The tables were both long and wide. During indoor free play, children took their play materials from the play areas and sit on the floor as they played; thus the same pattern in the presentation of activities as observed in Vambai and Tariro was followed. Sitting on the floor according to Mrs Shava allowed the children to use space more freely.
The ECD activities follow a half day programme. The programme is similar to that of Vambai and Tariro schools (see, Table 5.4 for Tariro school's daily programme). The difference is on the arrangement of the subjects starting and finishing time. School starts at 08.00 and ends at 13.00.I observed Mrs Shava and Mrs Gumbo from ECD "A1" and "B2" classes respectively.

The three respondents, the head and two teachers were invited to complete the survey on the 13th January 2016. Mrs Shava and Mrs Gumbo were both interviewed on 14th January 2016. I collected all the three completed survey when I went to interview the teachers. Mr Sithole was interviewed on the 15th January 2016. All participants acknowledged that they have heard about indigenous knowledge before.

Mrs Shava was the first to be observed at the school. There were 45 children in Mrs Shava`s class (23 girls and 22 boys) and the children were aged between three and four. I observed this class from 18th of January 2016 to 22nd of January 2016 for two to three hours a day. On days one and two she was observed from 8.00am- 10.30 am and on day three to five she was observed from 10.30am-12.30pm. I planned the observation schedule this way in order for me to observe some aspects of the entire daily programme but not to be in the classroom for too long a period as like with the observations at the other school I felt this might become overwhelming. Varying the times allowed me to get a deeper insight into how she incorporated IK in her daily activities.

From the observations, it emerged that Mrs Shava, like the teachers observed at Vambai and Tariro schools used a subject based approach in teaching the ECD children. The curriculum subjects taught are the same as those from the other schools. The curriculum subjects were always taught as teacher directed activities. Table 5.7 presents a schedule of classroom observations.

Table 5.7: A schedule of observation for Mrs Shava

Date	**Activity 1**	**Activity 2**	**Activity 3**
18/ 01/ 16	Language Arts 0800-0820am	Indoor free play 1030- 1100am	News and Stories 1100- 1230pm
19/ 01/ 16	Maths and Science 0940- 1000am	Indoor free play 1030- 1100 am	News and Stories 1100- 1230pm
20/ 01/ 16		Expressive Arts, 1100- 1130 am	Outdoor free play 1100- 1200 pm
21/ 01/ 16		Social Sciences 1050- 1110 am	Outdoor free play 1110- 1200pm
22/ 01/ 16		Technology 1030- 1050 am	Outdoor free play 1110- 1200 pm

During the activities, the teacher incorporated some aspects of IK into her lessons. As she was doing News and Stories on the 19th of January 2016, the teacher included some folk stories like *"Chisvo chaGondo"* meaning the eagle`s razor blade. An eagle is a most common bird in the area. In her Expressive Arts lesson she engaged children in games like *"nhodo", "tsoro"* and *"pada"*. These games were also observed to be played during outdoor play time. Mrs Shava use Shona more than English in her lessons. On the 22nd of January 2016 during Technology activities, the teacher demonstrated how traditional items like *"guyo nehuyo"* and *"duri nemutswi''* made work easier as she showed children grinding and pounding millet respectively as they could produce either peanut butter, mealie meal or peeling rice.

Mrs Shava mentioned that she used IK very often. She said,

> I usually use IK during both teacher directed activities and free play. I engage ECD children in traditional games such as pada, tsoro and nhodo because they motivate children to learn (14/ 01/ 16). This was also witnessed during my observations.

On teachers' abilities to use IK, in the survey, Mrs Shava was of the opinion that teachers used IK adequately. She suggested that since ECD children learn through play, you can observe teachers engaging children in activities such as games, rhymes and songs that were drawn from the children`s culture. In the interview, Mrs Shava also said that she used the games, rhymes and songs more often.

In both the interview and the survey, Mrs Shava mentioned that she had heard about IK before. The teacher who seemed to shy away from the interviewer said, "*I have heard about IK at a workshop done by the district personnel on the use of participatory methods" (14/ 01/ 16).* Upon further probing, she agreed that she had a partial understanding of IK. From the teacher`s explanation, IK is knowledge that is obtained from the community and is transmitted through participatory methodologies such as games, folk stories, riddles, song and dance.

Mrs Shava mentioned that she was guided by the ECD policy on the use of IK. She said, "*Yes I am guided by the policy in the use of IK in ECD.*" However, she failed to elaborate how the policy assisted her in the use of IK in teaching and learning activities in ECD. Instead she said that IK made mastery of concepts easier as children learn from the known to unknown. Thus she did not adequately address the policy issue.

Mrs Gumbo was observed from the 25th of January 2016 to 29th January 2016. Observations were made for two to three hours a day for five days. On days one to three she was observed from 10.30am- 12.30pm. On days four and five she was observed from 8.00am- 10.30 am. This was done as a way to get more insights into how she incorporated IK in her daily activities. Observations were similar to those of Mrs Shava as they were guided by the same ECD policies. Their difference was mainly on the arrangement of subject on the timetable. Below is a schedule of observations done for Mrs Gumbo:

Table 5.8: A schedule of observation for Mrs Gumbo

Date	**Activity 1**	**Activity 2**	**Activity 3**
25/ 01/ 16		Expressive Arts 1030- 1100am	Outdoor free play 1100- 1230
26/ 01/ 16		Social Sciences 1030- 1100 am	Outdoor free play 1100- 1230
27/ 01/ 16		Language Arts, 1100- 1130	Indoor free play 1100- 1200
28/ 01/ 16	News and stories 0800- 0830	Technology 0830- 0900	Outdoor free play 0900- 1000
29/ 01/ 16	News and stories 0800- 0830	Maths and Science 0830- 0900	Indoor free play 0900- 1000

The classroom set-up for ECD class "B" is similar to that of ECD class "A" (Mrs Shava`s classroom). The difference was the arrangement of the subjects on the timetable. Like all the other teachers observed, Mrs Gumbo used the national ECD syllabus (MoESAC, 2012) which is subject based. In her classroom there were similar play areas to those found in Mrs Shava`s class. The sitting arrangement was similar to that observed in the ECD "A" class. In the art and craft area, children have made some mats using *"mafuri"* which is a common plant growing on rocks.

During observations for Maths and Science on the 29th January 2016, the teacher engaged children in measuring quantities using some *"matende*". The children pour water and or sand in the containers of different shape and size as the teacher developed the concept of volume in children. On the 27th of January 2016 during indoor free play children used wild fruits like *"matamba"* to play *"nhodo"* and *"tsoro".* These fruits are commonly found in the community.

Corroborating the activities observed, Mrs Gumbo wrote (13/ 01/ 16) that she often use IK in ECD activities. In the interview, she said, "*Yes, I use traditional games like "nhodo" because it helps in the development of eye- hand co-ordination"* (14/01 /16). Like her colleague, she gave one example of the traditional game. On the use of traditional song and rhymes, Mrs Gumbo mentioned that she used them most. She added, "*I also use Shona folk stories because they help children to master concepts especially in language arts and social sciences"* (14/ 01/ 16).

On the usefulness of IK, Mrs Gumbo she agreed that it is useful. She said,

> Of the five years I have been teaching in ECD, I have found IK very useful though parents look down upon it. They see as if we are playing and not adding value to their children learning (14/ 01/ 16).

Upon further probing, Mrs Gumbo said,

> there is need to decolonise the mind as many parents think that anything local does not add value to learning and anything western is knowledge.

Mrs Gumbo was not sure whether IK was adequately used by teachers or not. She said,

> I cannot tell whether ECD teachers use IK adequately or not because I think no one is sure if he or she is using it. It is not also defined how much of IK should we use (14/ 01/ 16).

However, Mrs Gumbo agreed that ECD teachers use games, song and stories from the local community.

Mrs Gumbo wrote (13/ 01 /16) that she is not aware of IK. She supported her sentiments saying, *there is nowhere in my educational journey I was taught about IK,* *hence I cannot say I know about it.´* Mrs Gumbo professed ignorance of IK and she seemed disinterested to continue talking about the subject as she usually gave one word answers.

In the survey, Mrs Gumbo wrote (13/ 01/ 16) that she is not guided by policy on the use of IK in ECD. To corroborate her view, she said, "*the policy should bring more detail on the use of IK such as what it is and how it should be used in ECD"* (14/ 01/ 16).

The school head Mr Sithole`s responses were also informative. He mentioned that his teachers use IK often. Mr Sithole said that he has observed them several times using IK in their teacher directed activities and children engaging in traditional games during free play. To support his assertion, the Head during the interview (15/ 01/ 16) said, "*I have witnessed the teacher and children grinding sorghum using guyo nehuyo."* He highlighted that children are made to listen and tell folk stories and draw lessons from them. He gave examples of folk stories such as "*Chivhu tiza mvura"* and "*Nzou naSvosve".* Mr Sithole concurred that IK is useful in ECD. To justify his position, he said that IK bridges the gap between home and school as children meet what they do at home as they come to school. To him, children also learn the importance of their culture through IK.

However, in the survey, Mr Sithole wrote that IK is not adequately used in ECD. He mentioned that ECD teachers seem to lack knowledge in IK as they have gone through a too westernised an education system. Mr Sithole added, "*some school Heads even force ECD teachers to use English which end up compromising the use of our IK"* (15/ 01/ 16).

Mr Sithole wrote (13/ 01/ 16) that, "*he has heard about IK before."* He reaffirmed this assertion in the interview when he stated*, "IK is the talk of the curriculum review process these days. I have heard about it during my studies at the university."* To him, IK is knowledge obtained in the local community and has seen the test of time.
In both the survey and interview, the respondent mentioned that the ECD policy is not usefully guiding practice on the use of IK in ECD. Mr Sithole stated,

> The ECD policy is silent on the issue of IK so it cannot be regarded as useful. Teachers actually use their creativity in incorporating IK. In addition, it is not easy to tell whether they are using IK because there is nowhere in the policy it is defined.

On the incorporation of IK in ECD, Mr Sithole is of the opinion that ECD teachers should always incorporate IK in their activities. Mr Sithole stated:

> ...use of IK should be strengthened by policy; indeed there is need for a review of the policy to include IK. More so, teacher education should be revisited to train ECD teachers on the use of IK (15/ 01/ 16).

The head appeared very confident as he articulated himself on the policy issue.

5.3 Conclusion

The chapter focused on presentation of data. Data were presented according to three case studies. Each case study described a particular school and what the participants had to say about IK and its incorporation by ECD teachers into their daily activities. The schools selected were Vambai, Tariro and Kurai Primary Schools. Data from survey, observations and interviews were presented. Teacher qualifications, observation schedules and responses were given. Findings focused on participants' understandings of IK and the extent to which IK was included or not in their daily activities and teaching strategies. The constraints in relation to teaching were outlined. Some of these were structural, for example small impoverished classrooms, some were related to class size and time table difficulties Factors such as large groups, limited classroom space and sometimes limited were challenges most of the participants were facing on a daily basis. Analysis of data presented in chapter 5 is analysed according to themes in chapter 6.

CHAPTER 6

INDIGENOUS KNOWLEDGE AND EARLY CHILDHOOD DEVELOPMENT: WHERE ARE WE?

6.1 Introduction

The research findings described in the three cases under study were presented in the previous chapter. I took utmost care to observe, ensure accurate transcription, by not simply extrapolating the meaning of the participant's words, but by also considering the context of the whole discussion. In cases of quotes in English, I did not correct the participants' grammar where it was wrong. I also closely unpacked observation findings and drew on these to support my initial findings when analysing the transcripts.

Data collected through survey, interviews and observation was analysed according to four themes which were outlined in chapter 4 (see section 4.8). In this chapter, I present a thematic analysis of the research finding to enable me to answer the research questions.

The study unpacks the main research question, which is, How has indigenous knowledge been understood by Early Childhood Development teachers in Zimbabwe and incorporated into their pedagogical practices? In addition, the following sub-questions are also addressed:

1. What are the teachers` understandings of indigenous knowledge?
2. How and to what extent does indigenous knowledge inform teachers' classroom practices?
3. What strategies can be identified by teachers to better incorporate IK into their pedagogical practices?

These three sub-questions were at the core of my research study. Answers to these questions constitute major findings and the analysis thereof informed how ECD teachers` understand of IK and how IK is incorporated or not into ECD pedagogical practices.

Analysis of the three cases is done to bring out commonalities and differences based on the findings. Four themes were identified. These are:

1. ECD teachers` understanding of IK.
2. Tensions between indigenous knowledge and pedagogies.
3. ECD policy and IK.
4. Strategies identified by teachers for the incorporation of IK.

6.2 ECD Teachers` Understanding of IK

In this theme I analyse findings to answer the main research question, How has indigenous knowledge been understood by ECD teachers as well as one of the sub-questions; How and to what extent does indigenous knowledge inform teachers' classroom practices? I first explore participants' general understandings of IK. I then examine their understandings of IK and global knowledge with a specific focus on the tensions that became apparent between these two forms of knowledge.

6.2.1 General understandings of IK

IK is difficult to define, as I have indicated in chapter 1, section 1. 9. 2. Defining the term IK and establishing working boundaries is problematic (Dei, 2002). Like all knowledge, when situated in its traditional context, IK is viewed as traditional local knowledge (Turnbull, 1997). In addition, IK can also be explained as African knowledge that has existed in pre-colonial times (Hewson and Ogunniyi, 2011). From the descriptions above, traditional local knowledge could have endured the test of time and all the dynamics associated with these changes. IK is a product of social, historical and cultural influences (Turnbull, 1997).

In this thesis, as clarified in chapter 1, section 1.9. 2 and chapter 2, section 2,3, that IK refers to knowledge of the people who consider themselves to be indigenous on the basis of kinship and staying in the area for a time immemorial spanning from ancestry until the present time, even though some participants might have come from other areas around the country. They are regarded as indigenous for they share similar cultures. These indigenous people accept each other as being indigenous and believe themselves to be the first and rightful occupants of a geographical area (Dei, 2001). Thus, IK means traditional knowledge of local people which includes their culture exhibited in forms of song, stories, games and other rituals.

This understanding of IK concurs with that of Nyota and Mapara (2008) who also state that indigenous knowledge is expressed in a variety of ways including stories, legends, folklore, rituals, songs, games and even laws. An exploration of the teaching and learning materials which include games, song, rhymes and stories as well as the learning environment was undertaken during the study because apart from possibly being reliable indicators of IK they are also acknowledged preschool/ ECD methodologies (Morrison, 2004; Chen, 2001).

During analysis, it became evident that ECD teachers have varying degrees of understanding of IK. This understanding could be divided into three categories namely:

i. Having a reasonably good understanding of IK- these are teachers who can articulate what IK is, what it comprises, how it is used and who use it more often in their classes.
ii. Having a partial understanding of IK- these teachers showed some understanding, they were somewhat familiar with the notion of IK but gave incomplete answers about IK. They did however make use of it (IK) in their classes, but in a more limited manner.
iii. Having limited understanding of IK- these teachers profess ignorance or said they had very limited understanding of IK. Though they could be seen to use IK in their classes it was included in a very limited way; almost an incidental inclusion of IK.

In order to determine the extent to which the ECD teachers understood (or not) what comprises IK, I identified, based on literature review, a number of possible criteria which are presented in Table 6.1. Participants' responses were rated according to the criteria given in the Table 6.1.

Table 6.1: Categorising understanding of IK

Name of participant	**Definition/ Description of IK**				**Possible forms of IK**		**Mode of transmission**		**Areas where IK can be used in teaching context**
	Knowledge obtained from the local community	Traditional knowledge. Used in areas like child rearing. Knowledge for people	Regarded as indigenous in the area	Knowledge for Africans by Africans.	Folk stories (ngano) Music or lullabies	Games such as “pada”, or “tsoro”.	Transmitted mostly orally mainly by the elders such as grandparents.	Teaching of IK is mostly informal. Apprentice model used in teaching of skills.	Child rearing, education (transmission of society`s norms and values). Knowledge and skills. Agriculture, medicine etc.
Mr Hove	x			x	x		x		x
Mrs Dube	x			x			x	x	x
Mr Sigauke		x		x	x	x	x		
Mrs Moyo	x				x	x			
Mrs Sibanda	x	x							
Mrs Shava	x						x		
Mr Zhou			x		x	x			
Mr Sithole	x	x				x			
Mrs Gumbo									

Based on Table 6.1 the total number of points the participant could have scored was 5. If they scored 4 points and above, it was deemed that they had a reasonably good understanding of IK. If the participants scored between 2-3 points it was deemed that they had a partial understanding and if they scored below 2 points they were classified as having little insight about IK. A half point was awarded for each category. These criteria were useful in deciding how familiar the participants were with the notion of IK because they lent an element of objectivity to the analysis. I also drew on classroom observations to verify the findings and justify why I rated a particular teacher the way I did.

6.2.1.1 Reasonably good understanding of IK

ECD teachers' understandings of what comprises IK were analysed against the criteria given in Table 6.1.The input was drawn from the survey, interviews and observations. Teachers who mentioned all or most of the aspects in the table were regarded as having a reasonable understanding of IK.

During analysis, it became evident that two teachers, Mr Hove and Mrs Dube, had a reasonably good understanding of IK. Mr Hove acknowledged that he got to know about IK from the Teachers` College when he was training to become a teacher. He wrote that he also heard about IK at Great Zimbabwe University during a Philosophy lecture on African Traditional Education and he reiterated this in the interview on 31/ 10/ 15. He elaborated,

> IK is the knowledge that children acquire from the local environment for their survival in later life.

Mr Hove further mentioned in the interview on 31/ 10/15,

> IK is Knowledge for Africans by Africans which they use in their day to day life such as education and child rearing. IK is transmitted to the young generation informally by the elders such as grandmothers and grandfathers. He added *“munguva yechirimo/ chando vanambuya nana sekuru vaigara nesu pasi manheru tichidziya moto votitaurira ngano dzaana Tsuro naGudo dzaitidzidzisa zvakawanda setsika nemagariro kana mabasa neumhizha.”*

> [during the winter season, the elders like grandmothers and grandfathers would sit around the fire warming themselves with the young (approximately from 3-10 years) children telling them folk stories such as about hare and baboon characters teaching them (the children) cultural norms and values. They would also teach the young craftsmanship.

Mr Hove`s eloquence and precision in explaining IK indicated that he has reasonably good insight into IK. He touched on many of the aspects of IK outlined in the analysis in table 6.1. Observation of Mr Hove`s lessons also corroborated his understanding of IK. I observed a number of lessons including Language Arts, Maths-Science and Expressive Arts on 02/11/15, 03/11/15 and 04/11/15 respectively. He taught the "*Chitubu*" (spring) concept as a source of water in Maths-Science, used "*Ehuwe nyarara mwana*" (keep quiet baby) a lullaby in Language Arts and Traditional games such as "*chibata mabvi*" (touch your knees game) in Expressive Arts. He showed his deeper understanding of the IK he used, for example, the concept of keeping water safe on "*Chitubu*". Mr Hove confidently declared that he had a sound understanding of IK during an informal discussion held after the interview and in his responses in the survey. He also advocated for its (IK) use in ECD especially for content and methodology selection by ECD teachers.

Mrs Dube wrote in the survey that she heard about IK during her studies both at the Teachers` College and University. In the interview on 31/10/15, Mrs Dube confidently declared that she is aware of IK and is knowledgeable about it. She described IK as,

> ...local knowledge for local people. It can also be viewed as traditional African Knowledge which children get from the elders usually through the word of mouth or engaging in given activities.

Upon further probing, she said that learners gain knowledge as they perform given tasks such as baby minding which helps them to have knowledge about child rearing practices. Mrs Dube said, "To me IK is life itself*".* She used this metaphorical description to suggest that there is no time when children will be given formal lessons about IK. They are immersed in it throughout their day to day activities. She qualified the understanding of IK by adding the following,

> … However, I still feel I need to know more about IK for there is much talk about it in the Zimbabwean education system, let alone ECD (31/10/15).

This quote suggests that Mrs Dube has insight into what is becoming an important topic in Zimbabwean education circles; the place and positioning of IK in the curriculum (*The Herald*, 2017). During observation for Expressive Arts activities on 09/11/2015, she engaged children in traditional games such as "*nhodo", "pada", "raka raka" and "zai rakaora"* showing her understanding of IK. She would use the games as a basis for imparting knowledge as she would further explain the concept linking with the game, for example, with *"nhodo"* she would develop the top- down orientation. She realised that she needs to know more about IK.

Even though Mrs Dube has a reasonable insight into what IK comprises (according to her placement in table 6.1) she wants to get more detail about it so that she might make further contributions on how it can be more readily embraced in ECD. I make this inference based on her acknowledgement that there is a growing much interest and how to include it in the ECD curriculum in Zimbabwe.

Both teachers showed that they have a reasonable understanding of IK. This understanding appeared to have been predominantly gleaned from their College and University courses. Mr Hove and Mrs Dube`s responses resonate well with Greiner (1998), cited in Schafer et al., (2004) who described IK as unique, traditional, local knowledge existing within and developed around the specific condition of indigenous people to a particular geographical area.

They were both confident as they responded to questions related to IK and certainly both participants included aspects of IK into their pedagogical practices. This will be explored further in theme 2. In addition, one School Head, Mr Sigauke, also demonstrated a reasonably good understanding of IK. Mr Sigauke wrote (12/11/15) that he had heard about IK through a number of sources including college and university. During the interview on 16/11/15, he said "*I heard about IK through interaction with society, readings and from my studies both at the teachers` college* *and the University."* This claim that he had heard about IK from different sources reinforced the signal that IK is a topical issue in the country in general and the education system in particular (Msila and Gumbo, 2015). The emphasis currently placed on IK is beginning to necessitate that teachers develop greater insights into what it entails and how to implement it effectively in the ECD classroom.

Mr Sigauke described IK in the interview (16/11/15) as, "*the traditional knowledge passed from generation to generation and it is part of a people`s culture*." He further went on to say,

> IK gives people identity and in this case it can be described as African Knowledge. IK is passed from one person to the other orally since most of it is undocumented and as Africans we had no school system before colonisation. We have IK in various facets of life such as child rearing, education, agriculture and medicine, only that we have been brain washed to look down upon it because of colonisation (16/11/15).

Mr Sigauke's confident answer was not misplaced. As highlighted in table 6.1, Mr Sigauke, Head of Tariro did demonstrate that he had a reasonably good understanding of IK. His understandings of IK resonated with those of the teachers from Vambai, Mr Hove and Mrs Dube. IK is a way of life. Hence, one comes across it anywhere in the society. Mr Sigauke`s definition of IK aligns with Takawira`s (2002) claim that indigenous knowledge is the local community based knowledge that is unique to a given culture, is often developed over generations and it reflects the commonly held norms and values of a society (see chapter 2, section 2.3).

To confirm this understanding of IK during the interview, Mr Sigauke mentioned that the teachers make use of traditional song and games such as *"Dudu muduri" and "Sarura Wako"* and Shona folk stories of *"Tsuro naGudo."* in their lessons. Mr Sigauke`s response was confirmed by his teachers Mrs Moyo and Mrs Sibanda who were observed using IK in some of the Language Arts lesson and indoor play activities on 16/11/15 and 23/11/15 respectively. Mr Sigauke pointed out that IK is embedded in the child`s culture and mother language, therefore it limits communication barriers as children learn about things they meet in their real world (Chen, 2001). Throughout the interview session, Mr Sigauke was very articulate and it was not easy to doubt his understanding of IK.

6.2.1.2 Partial understanding of IK

In addition to teachers with a reasonably good understanding of IK, analysis of table 6.1 revealed that three teachers had a partial understanding of IK. These were Mrs Moyo and Mrs Sibanda from Tariro School and Mrs Shava from Kurai.

Mrs Moyo mentioned that she has heard about IK before at the college where she studied. In the interview, she said *“lecturers would constantly refer to the use of IK when teaching in ECD without clearly elaborating what it is and how it can be used”.* She further explained *“IK is local knowledge”.* When I probed further, she could not readily elaborate on her understanding of local knowledge. She said *“uuuummmm I have forgotten”* and she scratched her head. However, she did identify forms of IK as certain games, song and stories but could not give areas in which IK could be meaningfully used within the ECD curriculum.

During Language Arts and Social Science observations on 16/11/15 and 19/11/15 respectively, Mrs Moyo used very “English” rhymes like “*I am a little teapot*” exhibiting lack of depth in terms of Shona children`s rhymes and songs. Contrastingly, she also used traditional games such as “*nhodo”* in Language Arts on the same day. Thus, her teaching clearly showed that she has partial understanding of IK. She attempted to include IK in her teaching practices but this was done inconsistently and at times haphazardly.

From Mrs Moyo’s answers, and her reluctance to expound further on her understandings of IK, I came to the conclusion that her insight into what comprises IK was limited, despite having said that she has heard about it before. She admitted as much in the interview on 13/11/15 when she said *“because of this (not being fully taught) I cannot confidently say I am knowledgeable about IK”.* From Mrs Moyo`s remarks it could be deduced that lecturers at the college where she was taught seemingly referred to IK in ECD without actually going into detail. Mrs Moyo`s response (see section 6.2.1) is similar to that of Mrs Dube in that both feel they need to be further educated on the inclusion of IK. However, the difference is that Mrs Moyo confesses not to be confidently knowledgeable signalling some sort of a knowledge gap in IK whereas Mrs Dube demonstrated that she efficiently included aspects of IK in her teaching practices .

Another participant, Mrs Sibanda, defined IK as the mother language that is peculiar to a group of people in a community. She described IK as local knowledge which is unique to a culture or society that one lives. This description resonates with that of Greiner (1998) who says IK is the unique, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area. Mrs Sibanda as seen through her comments defined IK well enough. However, she too was not able to elaborate further. During the interview on 13/11/15 she said she just heard about IK in passing. She could not give any more details to her understanding of IK. She, for example, could not name any forms of IK. She said *"there are many ways of passing IK as there are many forms of IK".*

When pressed to explain further, Mrs Sibanda said she could not remember them well. Because of this hesitance and according to her placement on Table 6.1, I judged her understanding of IK as partial. She further stated "*I heard about IK in passing during my training at Marymount Teachers` College".* However, she could not clarify how she heard about IK at the college. She went on to say that she also heard about IK being aligned to the notion of mother language during the curriculum review consultations in 2015.

In the survey Mrs Sibanda wrote that she had heard about IK from home, church, community and workplace through gatherings and conversations. From the above findings, she has indicated that IK appears to be a phrase or term that is bandied about in many different locations. From Mrs Sibanda`s response, it could possibly be inferred that the term IK is becoming better known throughout certain communities. But, as Dei (2001) claims, awareness of a term does not necessarily lead to in-depth understanding of this term.

Another participant, Mrs Shava also mentioned that she has heard about IK before. This teacher seemed to shy away from the interviewer as she would avoid looking at him either facing sideways or down. The teacher also seemed to be hesitant to answer questions or chose to repeat the questions instead of answering them. In the interview on 14/01/16 she said, *“I have heard about IK at a workshop done by the district personnel on the use of participatory methods.”* From Mrs Shava`s response and according to how she was placed on the table (see table 6.1), it may be inferred that she does not have a good understanding of IK since she has only heard about it infrequently during a workshop.

A workshop does not necessarily allow for sufficient time to develop a deeper understanding of concepts such as IK. Despite the popularity of workshops for professional teacher development purposes they have been shown to be problematic. It seems as if teachers have difficulty in applying the information and strategies they have been taught in a workshop to the classroom context (Dixon, Excell and Linington, 2014). It is also questionable if the facilitators would have taken time to discuss IK in detail since the workshop was about participatory methodologies and not IK.

In the survey, Mrs Shava wrote *“IK is local knowledge”* (survey, 13/01/16) without further elaboration. Mrs Shava, however, said “*IK is transmitted to children through the word of mouth”* (14/01/16). She did not mention some forms of IK that might have shown a deeper understanding of IK despite the encouragement given by the interviewer to do so. Though assured of confidentiality by the researcher, Mrs Shava remained shy; possibly because she felt uncomfortable as her knowledge about what constitutes IK appeared to be limited. However, upon further probing, during the interview she acknowledged that she has a partial understanding of IK and this has been confirmed by her placement on Table 6.1.

From the teacher`s explanation, IK is knowledge that is obtained from the community and is transmitted through participatory methodologies such as games, folk stories, riddles, song and dance. Mrs Shava saw games, folk stories, riddles, song and dance only as a way of transmitting IK without regarding these as forms of knowledge. She could not give examples of traditional games, folk stories, song and dance that could be used in ECD as forms of IK. Her difficulty in identifying examples or forms of IK did not give me a sense that she had a deep understanding of what constitutes IK. Thus, I placed her into the category related to partial understanding of IK.

The other two school Heads also appeared to have a partial understanding of IK. Mr Zhou agreed that he has heard about IK. In the interview, he said, *I have heard about IK before in the academic fora.* He was reluctant to elaborate on the nature of the academic fora. It seems unlikely that he went through a formal session of learning about IK. In the interview on 02/11/15 Mr Zhou mentioned that his qualification, a Bachelor of Education degree in English did not expose him to ECD but it did explore folklore. He further said,

> I have little knowledge about IK and methodologies such as games, song, rhymes and stories which are widely acknowledged preschool/ ECD teaching and learning methods as it was not my area of study.

However, the fact that he might have read about it by himself as he claimed in the interview cannot be overruled. However, his insight into ECD might be questionable for he is not ECD trained. In addition ECD is new to the formal education system and is still received with mixed feelings (MOESAC, 2004). Mr Zhou defined IK as native knowledge found in nature or communities. Though the explanation has some strings of truth, it was not sufficiently detailed. He could not give a more detailed definition or description nor describe areas where it could be used as outlined in Table 6.1. Thus according to his placement on the table this School Head also has a partial understanding of IK.

Another School Head, Mr Sithole, wrote that he had heard about IK before (13/10/16). He reaffirmed this assertion in the interview on 15/01/16 when he stated, *"IK is the talk of the curriculum review process these days. I have also heard about it during my studies at the university."* He also mentioned that he had heard about it at the curriculum review process. To him, IK is knowledge obtained in the local community and has seen the test of time. Upon further probing, Mr Sithole was evasive when he was asked to clarify his understanding of the "local community". Instead, he said "*it is a place in which a school is located"*. Mr Sithole could not elaborate on the form of knowledge obtained in the local community that could be classified as IK such as child rearing practices, games, folk stories or song mentioned in Table 6.1. From the description he gave, I placed him as having a partial understanding of IK as indicated on Table 6.1. I placed him in this category because as Horsthemke (2008) notes not all knowledge from a local community is indigenous. In addition, though Mr Sithole said that he had heard about IK before, he was reluctant to elaborate his understanding of IK despite my probing further.

6.2.1.3 Limited understanding of IK

The third category of teachers was those with no or little understanding of IK. Only one teacher fell into this category and she was placed here as she gave very 'thin' answers and was unable to give any details about IK. It is, however, doubtful if this teacher had such a little understanding as she led me to believe in the interview since what she said seemed to be contradicted by her practice. For example, she had locally made materials in her classrooms such as millet, "guyo" and "huyo". Despite saying she no insight into what constitutes IK.

Mrs Gumbo was one of the few teachers who had made some of her own resources. During my observations I noticed some learning materials that she confirmed she had made herself such as drums, *duri* (mortar) and *mutswi* (thirstle) which are cultural artefacts (Vygotsky, 1978, Woolfolk, 2004). Mrs Gumbo is the one teacher who according to the table classification fell into the category of little understanding.

Mrs Gumbo forthrightly said that she is not aware of IK. She further supported her sentiments saying she never came across IK in her educational journey.

Mrs Gumbo in an interview on 14/01/16 said "*I know that what I teach is knowledge but I am not sure of their names whether IK or not".* From Mrs Gumbo`s response, it might be clear that she is not well informed about IK and if she uses it, she does so unknowingly. However, there is seemingly tension between her understanding of knowledge and IK through her actions; she demonstrates keen insight into what constitutes appropriate ECD pedagogies (see chapter 2, sections 2.7, 2.7.1.1, 2.7.1.2 and 2.7.1.3). She appears to have an intuitive understanding of IK as she finds it prudent to derive learning materials from the children`s culture. Her practice also resonates well with good ECD pedagogy which advocates for starting with what the child knows (Bredekamp and Coople, 2007). In ECD there is a close correlation between IK and tried and trusted ECD pedagogical principles. This notion is analysed further in theme 2.

Another reason for Mrs Gumbo to profess ignorance about IK is that as Shiza (2008) notes it is recognised that some people view being traditional as being backward. Thus, Mrs Gumbo might feel that by saying she makes use of IK in her classroom some people may look down upon her. She might also think that she might be viewed as incompetent and not moving with the time and adding little value to new knowledge as she said during the interview,

> As I teach, I use the available materials but they [education officials] seem to add value to important knowledge wanted to prepare children for future competitive world. We need to have more technology to move with time (14/01/16).

Her concerns confirm assertions made by Sibanda (2017) that, "some intellectuals have warped ideas about IKS because they associate it with the uneducated and backward just as the coloniser wanted them to believe" (*The Herald*, 14 June 2017, p. 8).

In brief, analysis of results indicates that no teacher had an in-depth or clear understanding of IK. Understandings varied from being reasonably good (three participants), to having a partial understanding (five participants), to having little understanding (one participant). Though this cannot be conclusively claimed, it is possible that the actual vehicle that should have instilled a rich understanding of IK, into the participants is one of the possible causes for their lack of in depth understanding. I refer to tertiary colleges of education and universities from where the teachers obtained their qualifications. This possibility will be briefly examined as there is documentary evidence that IK is not a priority focus at these institutions.

6.2.2 The place of tertiary institutions in promoting the inclusion of IK in the teaching curriculum

According to Pence and Schafer, (2006, p. 3),

> Several scholars of indigenous knowledge have criticized the universities and research centres involved in the 'knowledge industry' for their failure to recognize multiple ways of knowing and doing. Indigenous knowledge appears to have been excluded from current curriculum and theories.

This likelihood is very possible in Zimbabwe since the thrust to include IK in the education system has only recently become topical, spurred on by the curriculum review process of 2014- 2015.

Another possible reason for tertiary institutions not embracing IK might be because of the autonomous nature of programme development in the different institutions. Associate Teachers` Colleges design their own programmes and the accrediting universities take an overseeing role (University of Zimbabwe, 2012). They therefore do not necessarily embrace or include IK in the curricula.

To buttress this idea Mrs Sibanda said *"I heard of IK in the community, church and other fora".* The possibility is that she has heard of IK in other fora not the academy. Additionally, both Mrs Sibanda and Mrs Shava who have passed through a Teachers' College could easily have identified the college as being the place where they heard about IK. However, they both mentioned that they heard about IK from other sources. Despite not having detailed knowledge about IK participants like Mrs Moyo and Mrs Dube would like to become more informed. Again it appears as it tertiary institutions are not leading the way and offering practicing teachers opportunities to enrich their insights with regard to IK.

This lack of uniformity between and among tertiary institutions together with the Ministry of Primary and Secondary Education (MOPSE) (formerly MoESAC) points to a black spot in the country`s education. The black spot is illustrated in Figure 6.1 below:

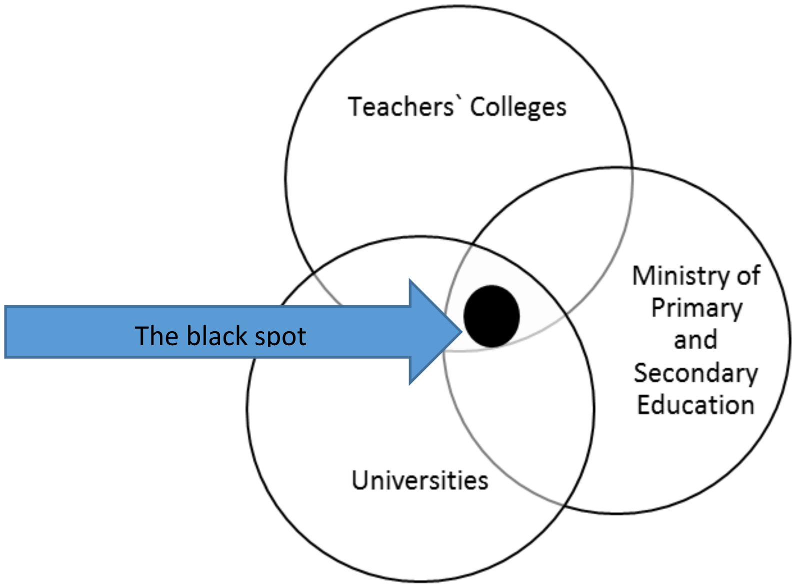

Figure 6.1: The black spot in education.

The black spot in the education system is caused by autonomy and independence of systems from each other which according to some critics might be caused by power hungry individuals and inconsistent ECD policies (Nhaka Foundation, 2017). However, this criticism of the autonomy and non- uniformity of teacher education does not mean to suggest that they have to do things in the same way. Rather there should be a collective understanding of the importance of including IK in all initial teacher education programmes.

It is also worth noting that in this study the participants who had a reasonable understanding of IK were all university graduates. Does this perhaps suggest a specific role for universities in relation to IK and IKS. Perhaps they should be leading the way and exploring how IK can be incorporated into both initial and in-service teacher education programmes.

From the discussion above, it has emerged that ECD teachers and school heads have varied understandings of IK that can be categorised as a reasonably good understanding, a partial understanding and limited understanding of what constitutes IK. This varied understanding is also apparent when exploring participants' understandings of IK and global knowledge and it becomes obvious that these understandings influence teachers' pedagogical practices.

6.2.3 Understandings of IK and global knowledge and concomitant tensions

Not only did participants show varied understandings of IK in general it also became apparent that tensions have arisen between understandings of global knowledge and IK in ECD. These tensions can be closely aligned to understandings of IK that have been unpacked in section 6.2.1. Confusion appears to arise from two sources, Zimbabwe's the colonial past and current education and policy documents (see theme 3). I therefore explore participants' understandings of IK and global knowledge.

There has been growing tensions between the colonised people and the colonisers on forms of knowledge to be used (Dei, 2001). These tensions may be premised on the following three questions:

1) What is knowledge?,
2) Whose knowledge should be regarded? and
3) What do you want to achieve with that knowledge?

Studley (1998) argues that everyone possesses knowledge; hence the diversity in people brings to the ECD classroom various types of knowledge and philosophies such as African indigenous and global or western knowledge (Higgs, 2008). Influenced by such diversity in understanding of knowledge, tensions have arisen on how ECD teachers` and School Heads perceive IK in relation to global knowledge. This point is well illustrated by Mrs Sibanda. In the interview on 13/11/15 she said,

> We need to produce ECD children who are functional in their society, hence we need to teach them what they live so IK is a solution to that situation. However, I am not closing on global knowledge for we live in a global world.

Mrs Sibanda`s statement confirms that good ECD practices aims to develop a child holistically; that is socially emotionally, intellectually and physically. Having developed in all the domains, the child becomes relevant and functional to the society in which he/ she lives. This aim can be achieved through both indigenous and global knowledge when the ECD teachers use developmentally appropriate and culturally responsive practices that are based on playful teaching and learning practices (NAEYC, 2009).

From Mrs Sibanda’s response it is possible that some view knowledge as having a “dual functions”- it is seen as a commodity and as a constitutive force of society (Reichman and Franklin, 1999). To this end, IK is a commodity in that it provides for people`s way of life and is a constitutive force in that it provides for the identity of the people of a given place who are associated with their norms and values (knowledge) (Reichman and Franklin, 1999).

In contrast global knowledge can be viewed as western knowledge or that knowledge which was brought to Africa with the coming of colonisation (Ogunniyi and Ogawa, 2008). Such global knowledge has been viewed by Ogunniyi (2011) to have suppressed and displaced the indigenous ways of knowing through the process of imposition and adoption. These tensions have also been highlighted in chapter 1, section 1.9.2 and chapter 2, section 2.3 beginning with how IK can be defined as local or place based knowledge (Chinn, 2007). According to Dei (2001) defining IK can be viewed as complex and problematic. As discussed in chapter 1, section 1.9.2, the complexity partly stems from lack of consensus on whom or what qualifies as indigenous, and also partly from what constitutes knowledge (Khupe, 2014).

Mr Sigauke defined IK as the traditional knowledge passed from generation to generation and said it is part of a people`s culture (see section 6.2.1.1). Given these understandings of IK, Mr Sigauke gave an apt description. In addition, he could elaborate what it encompasses; culture, games, stories and song. Likewise, Mr Sithole also mentioned that he has heard about IK before. He reaffirmed his understanding of IK in the interview by saying that IK is knowledge obtained from the local community and it is knowledge that has survived the test of time such as games and folk stories. He did however acknowledge the renewed interest in IK when he said, *"IK is the talk of the curriculum review process these days."*

However, there are proponents who contest the nature of IK and some understandings thereof. Horsthemke (2004), for example, is of the view that no knowledge can be described as indigenous because there is no certainty on the extent to which a framework can be indigenous. The argument is that everyone is indigenous in his or her area and has his form of knowledge as people come from diverse backgrounds. Hence, it becomes questionable as to whose knowledge can be regarded as indigenous. It can be further argued that due to the migratory tendencies of people, there is dilution of forms of knowledge. This dilution emphasises the dynamic nature of knowledge (Flavier, et al, 1995), and this dynamic nature makes it difficult to store knowledge in its original form; hence, it ceases to be indigenous.

Ogunniyi and Ogawa (2008) further extend this argument. They acknowledge that the migratory characteristic of people diffuses the question of knowledge ownership and might make it difficult for them and their knowledge to be absolutely indigenous. However, this does not negate the fact that there are indigenous people in specific areas with their specific knowledge. According to Hewson and Ogunniyi, (2011) knowledge which qualifies as indigenous in the African context is that (knowledge) which existed in precolonial times. They suggest that IK should also therefore be knowledge that is viewed as valuable and that it is knowledge that has been used by the community for a long time.

Unfortunately, what constitutes a long period has not been quantified (Msila & Gumbo, 2015). This might be due to Shona cultural orientations where time is measured in circular forms or terms of events such as trees shedding leaves to mark the beginning of a season rather than quantities in seconds, minutes, hours, days, months and years (Mbiti, 1969).

However, as already mentioned an important dimension of knowledge, including IK is that it is dynamic and so cannot be preserved and passed on in its entirety over a long period of time. This could also result in tensions and confusion about what is regarded as IK and what is regarded to be global knowledge (The South African Department of Basic Education, 2003; Khupe, 2014). This claim supports the arguments of critics of IK such as Horsthemke (2008) who suggest that IK is no longer IK because of changes over time which result in various modifications to IK.

However, Msilo and Gumbo, (2016, p. 99) claim that if the criterion of “Africanness” is applied IK can be considered to be the total culture into which Africans have been immersed, which constitutes similarities both at macro level (….. traditions relating to theory of knowledge….. story-telling, etc.) and at micro level (differences are of degree than kind). This description of Africanness resonates well with Mr Sithole`s claim that IK is knowledge obtained in the local community and has seen the test of time and it is evident enough that he has studied and read about IK himself. MacNaughton (2003: 49) offers yet an alternative perspective. Drawing on critical constructivists she believes that,

> …knowledge is and thus learning is always social and embody ethics, values and politics. They are always accomplished within the dynamics of power and the specific conditions that produce that dynamics will inevitably produce much of what is constructed and learned. If we don't look whose knowledge is being included and excluded in the classroom we become ignorant of the inequalities and injustices that are produced in our culture and our ignorance perpetuates them.

This counter argument examines the nature of knowledge through another lens; that of social justices and she acknowledges that teaching and hence learning is always embodied within power relations. She argues, therefore, for the importance of recognising all forms of knowledge within the curriculum so that issues of inequality and injustice can be recognised thereby acknowledging the cultural heritage of all children. This argument supports the idea that IK is generated within the society where the child lives and children, even before they come to the ECD centre, have had the opportunity to interact with it.

Given close links between the home and the ECD centre MacNaughton's (2003) views support the argument for including IK in the curriculum. This is especially important in ECD where all knowledge should be contextualised and based on the children's interests and needs (Bruce, 2010; 2015).

The question of whose knowledge should be included or excluded in the classroom thus becomes political and brings tension to the adoption of IK and/ or global knowledge in the ECD classroom. In the interview on 13/11/15 Mrs Moyo said,

> Though the ECD policy states that ECD children should be taught using the language best understood by the child, which is the mother language, it is the school policy that we use English from ECD to Grade 7.

In addition, Mr Sigauke, the Head of Tariro corroborated Mrs Moya's claim in the interview on 16/11/15,

> At times IK is not much embraced because it is not examinable and schools use English from ECD more because it will be the examinable matter at the end of the primary school course.

From the above assertions, it is apparent that IK is often marginalised. Emphasis is given to subject based knowledge which is drawn from western knowledge because this is what is written in the ECD policy documents. Given the importance of embracing IK, especially within the ECD phase (Follari, 2011), teachers should consider their sources of knowledge and avoid undermining the inclusion of IK in the curriculum. This plea could be extended to curriculum planners and ECD academics as some leaders are thought to be the biggest enemies to traditional knowledge in academia owing to their misconceptions (*The Herald,* 14 June 2017).

Furthermore, knowledge refers to all types of understanding gained through experience or study whether indigenous or otherwise obtained both in and out of school. It is something everyone possesses (Studley, 1998). In this view, all societies are capable of producing knowledge, hence the existence of IK and global knowledge with variations in the way in which the knowledge is viewed, used, assembled and disseminated (Turnbull, 1997). Mrs Dube in the interview on 31/10/15) said,

> IK is a type of knowledge that was created by us as Africans. However, it is limiting because it is difficult to meet global standards. Thus, embracing it is like going back to the Stone Age.

Mrs Moyo also supported the idea in the interview on 13/11/15 saying,

> Though the Ministry encourages the use of the mother language (Ministry of Education, 1987; SI 106 of 2005) which is part of IK, it is not a good idea because many concepts taught are not indigenous and can be easily expressed in English.

She went further to say,

> ECD programmes themselves are a western phenomenon and there is little or no place for IK. IK limits the children`s potential to fit in the global world.

In conclusion, the debates around what comprises IK and what is viewed as global knowledge abound. At times categories of knowledge appear to overlap and at times there are some divides between what is viewed as global knowledge and what is seen as IK. IK and global knowledge both exist in the school with the former occupying an inferior position as compared to the later. However, it is the view of this researcher that especially within the ECD space there is room for both types of knowledge. Perhaps the tensions have been exacerbated because there also appears to be confusion between the notion of IK and what is viewed to be good ECD pedagogy. These tensions will be explored in the following section.

6.3. Tensions between Indigenous Knowledge and Pedagogies

In theme 1, I explored participants' varied understandings of IK and the tensions that arise between IK and global knowledge. In this theme I explore how these varied understandings of IK and the tensions between indigenous and global knowledge influence teachers' pedagogical practices. I show how these tensions have been exacerbated by teachers' understandings of the curriculum and specifically by their understandings of ECD pedagogies. These tensions are analysed in terms of the teachers` understandings of IK (see 6.2.1.1, 6.2.1.2, 6.2.1.3 and 6.2.2), what according to teachers the children are expected to know and do and whether they (the teachers) think they are expected to include IK in the curriculum and their understandings of good ECD pedagogy. I firstly unpack the conflation of IK and pedagogies. Secondly, I interrogate teachers' understandings of play. Finally I explore teachers' understandings of what comprises a positive ECD learning environment and the value of IK in this environment.

6.3.1 The conflation of IK and pedagogy

In chapter 2 (see 2.7.1.3) it was noted that in quality ECD practice there is frequently a close correlation between what is considered to be appropriate content for children and how this content is shared with children while acknowledging children's cultural contexts (see chapter 1, section 1.9.4) (Bruce, et al, 2010; Wood, 2009). In other words content is often delivered through pedagogical strategies such as song, game and story. All these strategies demand an interactive, participatory approach to early teaching and learning (see section 2.7).

As argued in chapter 2.11 it becomes difficult to separate methodologies and IK (Dei, 2001). This is because most the learning in IK is done through an apprentice model. It is through a variety of different pedagogical strategies such as dance, song, rhyme and games (see section 2.8) that children acquire the knowledge, skills, attitudes and values required for success both in formal school and to encourage life-long learning (Gordon and Browne, 2017; Bruce, 2015).

In addition, encouraging social interactions, through for instance socio- dramatic play enables children to develop self-regulatory behaviours (see chapter 3 section 3.3.4) (Vygotsky, 1978) and to learn, for example, various adult roles. However, despite the benefits of socio- dramatic play, there is evidence of teachers not doing it, for example, the culture hut at Tariro is well resourced with dress up clothes but the tall grass around the culture hut suggests that it is not often used (see Figure 5.4 showing area around Tariro culture hut).

One of the consequences of the conflation between IK and pedagogy is that teachers view learning through play as being of little or no value. Despite teachers acknowledging the importance of IK and even at times including it in their teaching practices they were frequently unable to acknowledge that these experiences were valuable learning opportunities. For example, Mrs Gumbo was observed during Maths and Science lesson on 29/01/16, the teacher engaged children in measuring quantities using some *"matende*". The children poured water and or sand in the containers of different shape and size as the teacher developed the concept of volume in children. They find playful pedagogies, which is what the successful inclusion of IK into the ECD curriculum entails (see sections 2.11 and 3.3.7), too informal and spontaneous.

For many of the participants, learning appears to happen when they are "teaching', meaning they are instructing and telling the children. I observed that teachers such as Mrs Moyo (16/11/15- 20/11/15) and Mrs Sibanda (23/11/15- 27/11/15) are mostly engaged with children during teachers directed activities and seem to ignore them during play whether indoor or outdoor. The notions of co-construction of knowledge and sustained shared thinking (see section 3.3.7) do not appear to form part of their teaching practice. Thus, a playful pedagogical approach does not sit easily in a curriculum that is subject driven (MoESAC, 2012). This tension between a playful pedagogical approach and a more formal didactic ECD approach is not exclusive to

Zimbabwe. Similar tensions exist in almost all countries and these will be further examined in 6.3.2 when the tensions between IK and play are interrogated.

To sum up, in practice it becomes difficult to distinguish between IK and the vehicles though which this knowledge is shared. Games, songs and stories are all well acknowledged play based pedagogies. They are also an excellent way of sharing indigenous knowledge and of imparting cultural values and traditions. It can become difficult to decide when the one ends and the other begins. This conflation can to an extent account for the confusion that arises between playful teaching strategies and indigenous knowledge. For many, they are one and the same. Therefore, when teaching it becomes the teachers' role to instruct children in what has been determined as important knowledge for them to learn. Play and the use of indigenous methodologies is not seen to be part of the structured teaching process. This results in tensions arising between play based methodologies and IK.

6.3.2 Tensions between play and IK

As previously mentioned, teachers found it difficult to incorporate IK into their 'Western" subject driven ECD programmes (ECD Syllabus, 2012). For most of the participants, the inclusion of IK appeared to be too informal and too spontaneous an approach. It did not appear to contain the rigour of a more formal lesson. Mr Zhou said "*ECD teachers should use IK for motivation of learners. However, they should not over dwell on it since it does not prepare the children for the competitive global life and experiences*" (02/ 11/ 15).

Play has more of a recreational function. I observed during Mrs Dube`s lessons from 09/11/15- 13/11/15 that the teacher would resort to a more didactic lecture method at some stage of the lesson especially during lesson development. However, even in western contexts play is not necessarily well incorporated into ECD pedagogical practices (Wood, 2009). Despite research showing how best children learn, there is resistance to play based pedagogies (Wood, 2009). According to Anning, Cullen and Fleer (2009, p.13-14),

> In response to repeated concerns about negative effects of young children being exposed to too formal curriculum too soon, guidance notes for new Foundation stage curriculum for 2008 emphasise the importance of learning through play.

The assertion confirms the gravity of concerns on the formalisation of ECD. The ECD teacher directed activities were too formal and gave less freedom to the children. This has been attributed to the need to meet the syllabus objectives. To confirm the thinking, in the interview, Mr Hove also said,

> …the education system is too examination oriented and the teachers are forced to use English and embrace western knowledge which has examination bias. This has influenced our ECD centres to admire the western style and knowledge. This has also killed the ECD teachers' creativity and compromised on their ability to use IK (31/10/15).

Yet, despite the emphasis on a more formal subject based approach as evidenced by the timetable (see Table 5.4) some participants were able to recognise the value of IK for successful learning. Mrs Shava, in the interview held on14/01/16, asked rhetorically "*If you argue to say IK is limiting, then which knowledge is not limiting*?" She added,

> The ECD children don't perform so well because the concepts taught are mainly out of context for them so it is prudent to have IK in ECD.

Mrs Shava's response also substantiates Chen`s (2001) view that learning should happen in the child's cultural context. According to NAEYC (2009) one of the pillars of the ECD Developmentally Appropriate Practices (DAP) is to be socially and culturally responsive (see chapter 2 sections 2.713 and 2.7.1.3.1). In addition, learning is based on young children's interests and needs; therefore IK imparted through playful pedagogies is a good starting place (Follari 2011; Bruce & Meggit, 2010.

For some of the teachers, not only was playful learning problematic, the language of teaching and learning became an additional stumbling block. For Mrs Dube

(31/10/15) and Mrs Moyo (13/11/15), use of the English language made it too difficult to express concepts related to IK. In their schools, English (which for them had become synonymous with globalisation) was the preferred medium of instruction. During lessons from 16/11/15- 20/11/15, Mrs Moyo was observed using more English than Shona which is the mother language. She used very English rhymes like "I am a little teapot" and "Baa baa black sheep" to mention just two.

In the interview (13/11/15), Mrs Moyo disclosed that though the policy states that ECD activities should be done in the language best understood by the child, it is the school policy to use English from ECD up to grade 7 and this was corroborated by the Head in the interview (16/11/15). To teachers, IK therefore is undeliverable using English language as it presents many challenges to children from homes where English is not spoken often.

Even though the use of English at ECD level is in contrast with the Ministry of Education (2006) guideline which states that children can be taught in any one of the sixteen (16) languages recognised by the Zimbabwean Constitution (2013.), the schools still adopt a policy of teaching through the medium of English (Gudyanga , Dzirikure and Wadesango, 2015). Seemingly, these teachers were not able to effectively switch between using the children's mother tongue and English to ensure the easy comprehension of IK concepts using play based methodologies.

However, Mr Hove successfully used Shona and included indigenous concepts in his lessons as well as made use of indigenous songs, rhymes and games to reinforce concepts being taught. I observed him on 02/11/15 during the Language Arts discussion, the children took turns to do *ngano (folk stories)*, most popular was *"Chivhu tiza mvura" and "Tsuro naGudo".*

Although Mr Hove recognised the importance of IK and included it in some of his lessons he was seemingly not able to adopt a rich play based approach. The learning day is predominantly subject driven (See Table 5.4 showing the ECD timetable).

Despite teachers placing value on incorporating IK into their daily programme, using IK especially as a playful pedagogical approach was not an intentional teaching strategy adopted by the teachers. During lesson observations there was a tendency by teachers to drift away from play pedagogical practices to lecture method. Mrs Sibanda on 24/11/15 was observed during a Social Science lesson on roles of family members and almost resorted to telling the children without engaging them in play. In fact, in survey, interviews and informal discussions the word play was infrequently mentioned, despite children at times engaging in playful activities.

For example, during indoor free play the children in Mrs Moyo's class were observed (16/11/15) playing *"mahumbwe."* Children were imitating various parental roles such as baby minding and hunting using a *"tsvimbo"* [club]. However, there was little interaction between teacher and children to reinforce learning through co-construction of knowledge. The teacher sat on her chair without minding what the children were doing.

On 25/11/15 Mrs Sibanda`s class was observed engaging in '*chamuhwande-muhwande'* (hide and seek) during outdoor free play. When they play `*chamuhwande – muhwande*`, children had to group themselves into teams. They took turns to hide. As one team hid the other team waited for a signal to be able to go and look for those in hiding.

Those who were searching had to find all the members who might be hiding in different places. If the 'searching' team did not find all those who had hidden they would be regarded as having lost the game. The winning team then goes into hiding again. As the searching members look for those hiding, they have to listen carefully to pick up any sounds so as to be able to locate those in hiding. Again, the teacher played a passive role and did not maximise the potential learning that could have arisen out of this game by, for example, adopting a playful pedagogical approach. She sat on her chair and marked books for work done earlier.

Yet, the knowledge, upon which these games have been based, has been at the heart of indigenous children`s play and has been transmitted for generations (Nyota & (Mapara, 2008). Jegede (1998) cited in Msila and Gumbo (2016, p. 99) argues,

> ...indigenous populations are original inhabitants of Africa who moved from one part of the continent to the other as hunters and gatherers whose population growth results in kingdoms and chiefdoms.

The recapitulation theory of play confirms that children play what has been played before in their culture (Crain, 2000). Unfortunately, however, much of the IK acquired through games and folk tales is not necessarily viewed as being educational by the teachers. Based on observations, Mrs Dube and Mrs Moyo were found to be ambivalent about the incorporation of IK into their teaching practices. Many of the participants found it difficult to understand how, despite policy constraints SI 106 of 2005, ECD syllabus, 2012), IK could still be given a prominent place in the learning day and how this day could be successfully implemented through purposeful play based teaching and learning.

A pedagogy of play (Wood, 2009) (see section 3.3.7) would be an ideal way of combining IK and appropriate pedagogical strategies and still enable the teachers to meet the specific Zimbabwean curriculum requirements (see section 2.7). In pedagogy of play, teachers are required to interrogate their pedagogical practices more critically and to adopt a more playful approach to teaching and learning throughout the learning day. This shift has been promoted by proponents of socio-cultural theory which forms the theoretical underpinning to this study.

A pedagogy of play requires that teachers become more responsive to teaching and learning moments and make use of sustained-shared thinking to co-construct knowledge with children (Wood, 2009). Thus it advocates that IK is given a central position in the curriculum. Furthermore, a pedagogy of play requires that teachers adopt a critical reflective approach towards their teaching (Wood, 2009).

Critically reflective teachers will think deeply about the learning content which is informed by IK and their teaching strategies. They will also think deeply about the learning environment. Quality ECD learning and teaching can only take place in a positive learning environment (Tassoni and Beith, 2005) (see section 2.9). In the following section, I, therefore, interrogate the relationship between IK and a positive learning environment.

In summary, overall findings revealed that the formalisation of activities gave limited space to the incorporation of IK, specifically through the use of playful pedagogies. In addition, the formalisation of ECD leads to teachers focussing more on the western knowledge at the expense of IK as they treat IK as being less valuable. And because of this formalisation meaningful play opportunities are being marginalised despite play being the heart of quality ECD practices (MoESAC, 2012).

6.3.3 The place of IK in the ECD learning environment

The learning environment in an ECD context is shaped by the pedagogical approaches adopted by the teachers. These in turn are influenced by the ECD curriculum. In chapter 2 (see sections 2.8 and 2.9), one explanation of the ECD curriculum is said to include everything that happens in the learning day. In this understanding of curriculum ECD, teachers have to consider the 3Cs (see Figure 1.2) as well as their pedagogical practices. The emphasis is still on play based approaches to teaching and learning in the ECD context. In this understanding of curriculum the learning environment is pivotal to ensuring quality ECD practice.

A good ECD environment must be safe and enjoyable with sufficient learning materials that are developmentally, culturally and contextually appropriate and responsive (Follari, 2011). The environment should also allow for cordial interactions between and among the children sharing adequate and appropriate learning materials (Morrison, 2008). The learning materials should be adapted to suit the children`s cultures and backgrounds where possible (Chen, 2001; MoESAC, 2012).

The play materials should in part resemble objects that are found in the child`s community. Such objects are familiar to the child and used in their day to day living. This familiarity supports easier understanding of the content to be learnt (Rogoff, 2003, Woolfolk, 2004). From an ECD perspective, it is essential to have both indoor and outdoor play areas which are adequately equipped to promote the holistic development and learning of children (Tassoni and Hucker, 2005; Bruce and Meggit, 2005; Minnet, 2010; Follari, 2011). I briefly explored these two learning environments, with a specific focus on learning materials.

6.3.3.1 Indoor learning materials

From the observations, most of the learning materials available to the children are found in the communities where the schools are situated. Table 6.2 depicts the learning materials observed for each school. These learning materials include those found in the culture huts.

Table 6.2: Learning materials observed in the classrooms

Vambai	Tariro	Kurai
Musical instruments such as drums, shakers, mbira, and dance props such as “ngundu”, “magavhu”. Tambourines, key board, guitar.	Drums, shakers, mbira, “Guyo, huyo” [grinding stones], “duri” [mortar] and mutswi, “ngundu”.	Drums, shackers, mbira, tambourines, clappers.
Models such as hare, monkeys, cattle and bucks	Models such as hare, monkeys, cattle and bucks	Models of animals such as hares, monkeys, cattle
Alphabet with big five animals namely, the lion, elephant, black rhinoceros, buffalo and	Alphabet with big five animals. Number cards with apple, bananas, mangoes	Alphabet with big five animals. Number cards with apple, bananas, mangoes

leopard. Number cards with apple, bananas, mangoes		
Picture books, charts 'tsvimbo' , plastic blocks	Picture books, charts, plastic blocks	Picture books, charts, wooden blocks

As shown in Table 6.2, various learning materials were observed ranging from cultural music instruments, charts and models of animals. Cultural musical instruments such as drums, shakers, and *"mbira"* were observed at Tariro School from 16/11/ 15- 27/11/15. Upon further probing, Mrs Moyo on 13/11/15 said *"The musical instruments you see are brought by the children from their homes".* Like her counterpart, Mrs Sibanda mentioned,

> The children bring these materials from their homes and we can safely say that they are drawn from the local community that usual use the material in their traditional dances or rituals (13/11/15).

At Kurai School, models of animals found in the locality such as hares, monkeys, cattle and buck were observed in the classrooms (18/01/16- 29/01/16). Upon further probing Mrs Gumbo on 19/01/16 said, "These animals are found around this area and the children are aware of them." Mrs Shava on 17/01/16 also said,

> The models of animals you see were made by the children themselves or they brought them from home. They are all animals found in the local environment.

Mrs Gumbo in an informal discussion on 26/ 01/16 said,

> Though I am not very knowledgeable about IK, I think it is good for people to have their knowledge and learn it at school because you easily grasp and also have your identity but the challenge is learning materials.

The materials observed might suggest that the ECD teachers embrace IK in their learning environments as the materials were drawn from the local environment as confirmed by the teachers. However, the materials are not there because they are culturally relevant; the choice is a pragmatic one, they are readily available in the local communities and hence available. They are seemingly not specifically used because they might help to better contextualise learning. Yet, teachers should adapt their learning materials to be culturally and contextually relevant for meaningful learning to take place (Bredekamp and Copple, 1997). In addition, schools are mandated to have them as the Ministry of Education has directed all schools to have culture huts. However, the tall grass that I observed growing around the huts suggests that they are not used that frequently by the children. The play materials in the culture hut seem to also suggest that they are not frequently used as they gather dust.

The assertion is supported in Figure 6.1 showing some of the observed play materials being displayed. These are items usually used in the traditional kitchen.

Figure 6.1: Traditional kitchen utensils

Figure 6.1 shows the various kitchen utensils that were observed. These included the clay pot, "*rusero*", "*tswanda*", (motar) and "*mukombe*". The clay pot is used for cooking. As the name suggests, it is made of clay soil. "Rusero" is used to separate grains from chaff. This is normally done with small grains like rapoko, millet and sorghum. Mortar is used to pound the grains so that they will be grinded to produce mealie- meal. "Mukombe" is made from a special type of dried pumpkin. It is used for fetching water used in a similar to a cup. However, though they are called ‘play materials’, the way they are laid out suggests they are for ‘looking at’ rather than for play purposes. Is this display simply a way of adhering to the Ministry of Education’s directions?

Of interest in the picture is the label that is written in capital letters. If teachers were intentionally supporting the inclusion of IK they might have labelled the items rather than name a play area. Children should be exposed to developmental print but this should be correctly written in sentence case and given that the children’s home language is not English, the label should have been written in the mother language (Jalongo, 1992; Tompkins, Bright and Winsor, 2013). This will also assist the children to know the things from their culture better.

It was also observed at Vambai School in Mr Hove`s classroom from 02/11/15- 06/ 11/15 that the classrooms have alphabets and number lines displayed. The fruit displayed on the alphabet and number lines are mainly exotic and include apples, bananas and grapes, though some of them like bananas and apples are now grown in some wetter parts of Zimbabwe. However, they are all exotic fruits and also not grown in the area around Vambai school.

Though these fruits might be known to some children, it is important to consider the maxim of teaching especially in young children that we start from the known going to the unknown, (Kasambira, 1994). Indigenous and wild fruits like *“mazhanje”* (sugar plums) and *“matamba”* are very common in the area. In fact, there is a place known as “Jiri” meaning a mountain forest of sugar plums. However, the ECD teachers have seemingly ignored these fruits that are locally available as they are not incorporated in media such as alphabet charts that are used by children on a daily basis. The same charts were observed in Mrs Sibanda`s and in Mrs Dube`s classrooms.

In addition, observations made at Tariro School in Mrs Moyo`s classroom (16/11/15-20/11/15) also show that no attempt has been made to adapt the charts to include pictures of some local animals. Rather, it was the tiger that was emphasised. The ECD teachers, for example, use the tiger to motivate the children as they group them. Mrs Moyo mentioned "I use the tiger to motivate my children because it is a fierce animal". Perhaps it would be more appropriate to use fierce animals that originate in Africa such as the lion, leopard or even the hyena.

Given the policy thrust to incorporate IK in the classroom, one can ask why the pictures on these charts are predominately of exotic fruit and animals. There are a number of possible reasons and these reasons are often closely intertwined.
One reason for using the charts is that they are donated by funders. ECD teachers explained that many learning resources are provided by the District Education Inspector`s Office under a donor funded programme called Early Reading Initiative (ERI). As Mr Hove said,

> …we have no choice, these alphabets have been dictated to us by the Education Inspectors (EI) and it's a top- down approach. What we are told is, ERI is a donor funded programme to eradicate non- readers in schools (03/11/15).

From this remark, two possibilities become evident. The first is that Education Inspectors sourcing for material assistance are not necessarily well versed in the pedagogies that are suitable for ECD learning (Chikutuma, 2013). This claim was reinforced through informal discussions with Mrs Sibanda and Mr Hove on 15/11/15 and 05/11/15 respectively. Mr Hove said that ECD is an opportunity area for many. Some policy makers like Education Inspectors (EIs) joined the ECD phase, not because of competency or interest in this phase of education but because there are worthwhile employment opportunities. To confirm his assertion, Mr Hove said,

> Our Education Inspector responsible for ECD is not an ECD specialist so is the Deputy Provincial Education Director (DPED) for ECD, so how do we expect to have proper guidance for embracing IK?

He further stated, 05/11/15,

> The problem we have in ECD is that the programme is led by people who are not knowledgeable about the area but only get opportunities through kin connections. These people just take

> everything offered to them by donors without considering its suitability to our ECD programme.

Mrs Sibanda supported Mr Hove's claims when she said,

> Those people in the echelons of power in ECD are mostly opportunists. They give us teaching materials such as these charts and alphabets because they are not knowledgeable about ECD practices, and they just embrace anything that comes with donors (15/11/15).

Often Education Inspectors (EI) and school heads are promoted to lead schools because of their age and teaching experience (Statutory Instrument 1 of 2000). Such criteria where teaching experience without regard for expertise is taken as a prerequisite for promotion, is detrimental to the ECD sector. The ECD programme is a relatively new introduction to the education sector and thus still regarded as being junior in the profession. Thus, ECD teachers are given relatively little support. This is concerning because in addition to receiving little support there is a deficit of almost 6000 ECD teachers (Nhaka Foundation, 2018). This results in the ECD area being led by people who have little if any ECD expertise.

In addition, Mrs Dube, in an informal discussion on 12/11/15 said, "*nepotism cannot be ruled out in such appointments of EIs or district ECD trainers".* Sadly, therefore the authority figures in charge of education departments and schools usually do not have any ECD qualifications even though ECD classes are situated in schools (Nhaka Foundation, 2017). They are the ones who take important decisions in relation to, for example, classroom resources without having sufficient insight into what are appropriate learning materials in the ECD context.

Mr Hove in the interview on 31/10/15 said, "*These learning materials are just forced on us. We don't have a voice because we are not connected".* From Mr Hove`s statements, I argue that the ECD teachers don't think they have a voice for fear of victimisation if one is not connected to people in authority such as education officials and politicians. For these reasons, many materials that don't embrace IK are provided to ECD teachers.

Much of this material as has been already mentioned is provided by donor organisations. These organisations are also not familiar with the backgrounds of the schools they are sponsoring because in most cases these donations come from Western countries such as Britain, United States of America and Switzerland. However, in country that has serious economic challenges financial expediency also needs to be considered. Alphabet charts are necessary in classrooms. Could teachers not possibly find a way to merge these conflicting knowledge sources exotic versus indigenous fruit? By doing this they could further children's learning while drawing on both indigenous and global knowledge.

To strengthen his previously mentioned claim, Mr Hove added *"Some of these donations are bent on advancing the western hegemony and politics. They see as if anything African is not worthy knowledge"* (05/11/15). Hence, neglecting or relegating IK in ECD. Mr Hove's assertion is supported by Mutema, 2013, who writes that the donors may at times be bent on advancing their agendas, such as political thereby neglecting the fact that communities have their own forms of knowing and doing things. The idea resonates with Shizha`s (2006) idea that IK is sometimes looked down so as to perpetuate Western Knowledge (see 6.2 and 2.3).

Mrs Moyo on 18/11/15 in the informal discussion supported Mr Hove`s sentiments and said,

> …this aid sometimes come with strings attached such as foregoing some of your knowledge usually to advance political interests of the donors". Hence, they might seek to advance their knowledge base at the expense of IK.

Mrs Gumbo on 14/01/16 added "*It is unfortunate that these materials are forced on us and there are no two ways about it. As you can see they are even on the walls outside and every school is forced to have that on the walls."*

From the teachers` statements, it is clear the dominant form of knowledge is the western as compared to IK and several means are used to perpetuate it. Certain dominant discourses allow particular groups of people to exercise power that benefit them (Sullivan, 2013). Therefore, in order to challenge the hegemonic paradigm and knowledge dominance we need to pick apart and analyse discourses that foster western knowledge.

However, some of the teachers` scepticism might be misplaced as some organisations donate because of social responsibility factors not necessarily to advance their knowledge or political interests in donor countries. The teachers might also lack voice and agency (MacNaughton, 1997), because if they strongly feel western materials are not good for their practice, they can advance their cause to make or be provided with more appropriate materials for their classrooms. The teachers` voice might be stifled by a lot of bureaucracy in the education system or lack of will on the powers that be like the directors and politicians. The critical link that binds curriculum implementation, the teacher agency continues to be cast aside by political ideologies of most hues (Batra, 2005).

Another reason for not adapting learning materials to include aspects of IK could be pressure of work. By their own admission most teachers do not have a good understanding of what comprises IK (see section 6.2) so it is understandable that they make use of materials supplied by the Ministry of Education without effecting any adaptations. Furthermore, in an attempt to increase learning resources teachers use technological gadgets like smart phones to take photos of perceived relevant learning materials. These photos are often taken from internet pictures or books. Teachers might also not be aware of copyright restrictions and so they end up plagiarising content without making any effort to adapt. Figure 6.2 is an example of such a chart seen in a classroom at Tariro School.

Figure 6.2: A chart compiled by teachers

Though the lion, zebra and giraffe are animals found in the Zimbabwe and constitute part traditional knowledge, they are not common in these areas. It can of course be argued that children also need to be given new knowledge and have their learning base extended (Cheng, 2001). Hence, it is not realistic to only use animals/ items in the area, for example, to write alphabet charts using indigenous animals/ items only which are found in the local area. Today, many of these animals such as the lion and giraffe are only found in the game parks, which children are unable to visit because of economic constraints. However, they are indigenous to Zimbabwe and they are part of the natural environment and children should know about these animals.

The question to be asked is, ‘What is appropriate knowledge to share with young children? Perhaps more importantly, the question that should be asked of teachers is how they make relevant knowledge accessible for children and this of course talks to their pedagogical practices and how to include different knowledge forms so that learning remains relevant. I now explore learning materials found in the outdoor learning environment.

6.3.3.2 Outdoor learning environment

The outdoor learning environments provide opportunities for children to run around and play with each other. However, the outdoor play material appears to be limited. It includes items such as merry-go round, slides, see-saws, traffic area and a floating bridge. These are made from either metal or wood. In Table 6.3 a brief overview of the outdoor play area and available learning materials is provided.

Table 6.3: Overview of the outdoor play areas

Vambai	Tariro	Kurai
• Outdoor materials: merry- go round, slides, see-saws, traffic area and floating bridge. Outdoor equipment made of metal • Adequate play space available • Wire- fenced play area	• Outdoor play materials: see- saw, swings and sand pit. Outdoor equipment made of metal • Play space seem to be limited. • Wire fenced play area	• Outdoor material: swings, see-saw, floating bridge, sand pit. Outdoor equipment made of wood. Adequate play space available • Pictures of people playing “jaka” a traditional dance on walls of what /where. • Wire fenced play area.

As indicated in Table 6.3 the ECD outdoor play areas of the three schools are wire-fenced. Fencing is intended protect the learning environment and to ensure children`s safety during play. According to Tassoni and Beith (2005) a playing environment should be safe, secure and providing a relaxed atmosphere. The idea of a protected area or a constrained playing area might not be new to the Manicaland people but fencing is. Thus, using some means of protecting homes and playing areas is a practice which is not contradictory to IK practices.

In traditional Shona culture children too played in protected areas. ‘Fencing’ would comprise thorny bushes known as *“ruzhowa”* or *“rusosa”*. In fact, dating back to the country`s pre-colonial era, the people would fence their homesteads by building stone walls without mortar known as *“rusvingo”* and it is from such architecture and settlement the country has derived its name “Zimbabwe” (Zimbabwe Embassy: undated). See Figure 6.3 of the Great Zimbabwe ruins that resemble *“rusvingo’’*.

Figure 6.3: The Great Zimbabwe ruins. Adapted from https://en.wikipedia.org/wiki/Kingdom_of_Zimbabwe

The idea of fencing was to establish a protective barrier to protect family members including children from the dangers of animals and other hazards. However, in traditional society, the children were allowed to move out and play in the neighbourhood or accompany their elders as they went about chores outside of protected areas. Children would perform tasks such as looking after livestock. This gave prominence to the apprentice mode which is similar to Vygotsky`s socio-cultural theory as the children would move freely while playing outdoors and learning life skills. Rogoff (2005) describes the apprentice model as guided participation. When beginning a process, children depend on others with more experience (see section 3.3). Over time, they take on increasing responsibility for their own learning and participation in joint activity (Steiner and Mahn, 2005).

Learning in traditional Zimbabwean society has been informal. Informal institutions pack their knowledge into routines and metaphors. African communities have thrived on knowledge condensed into idioms, metaphors and routines (*The NewsDay*, 14 December, 2016). Hence, the routines resemble much of the apprentice model. Thus, fencing or the idea of establishing a protected living space is common practice in both indigenous and Western settings as a way to ensure safety for young children as they play and learn (Minnet, 2010). The difference is in the way these spaces are created, types of materials used and not the purpose.

Wire fencing around the school might be perceived by some as a practice that could limit children's acquisition of IK in ECD centres as children no longer have access to explore their natural environment. Those who argue may suggest that protecting the area was done to keep out animals from homesteads and not to restrict children`s movement and play, because raising a child was seen as the community`s responsibility. Thus, children were allowed to move from the protected area to go and play freely elsewhere. As Mr Hove in an informal discussion on 05/11/15 said,

> …fencing is limiting unlike in the traditional society, ECD children would learn a lot from the natural environment without restrictions unlike the school setting which is becoming more restrictive and artificial.

However, within the ECD context children are still encouraged to move freely and to interact with their environment. This still affords them many learning opportunities to acquire various life skills from the environment. As children explore their outdoor environment, they gained knowledge such as the types of trees, and herbs. However, this type of exploration is limited and therefore demands a different role from the teacher if children are to be immersed in rich learning opportunities. Teachers need to become co-constructors of knowledge and to support sustained shared thinking to ensure children acquire the necessary indigenous knowledge and skills such as, for example, how to ensure food preservation and search for medicinal herbs.

Mr Hove further highlighted some other tensions between the outdoor school environment and traditional ways of being. He said,

> ...schooling is artificial because in the first place it is a western concept. It was not there in the traditional African society and some things taught at school are contrary to our lives, for example, the play equipment they use at school are not the real objects they use in day to day life (05/11/15).

From Mr Hove`s sentiments, it appears as if there is a gap between home and the ECD centre. He describes the two as being in opposition to each other. From Mr Hove`s statement, it could be argued that ECD children live two different lives, one at school and the other one at home. From Mr Hove's remark this could possibly be attributed to the equipment they use at school which is never found in the home. Such gaps could compromise the effective incorporation of IK into the school for a school as a western concept will definitely have a western slant on what constitute its curriculum. This further adds to the tension between global and western knowledge that was explored in section 6.2.2.

The outdoor equipment as previously started is made up of metal and wood. It includes items such as merry-go round, slides, see- saws, traffic area and floating bridge; see Figure 6.4 of a floating bridge.

Figure 6.4: A floating bridge

Though swings, slides and a floating bridge are `imports`, they serve a similar function to playing in the open fields. In the traditional setting, children would play outside; climb trees, swing from branches and slide on rocks. In areas where, for example, there are no longer trees they afford the children an opportunity to climb and to swing, activities enjoyed by most children. This adoption might concur with Follari`s (2011) claim that play is universal but culturally bounded. All children seemingly play in similar ways regardless of culture but games are adapted to suit the culture and context. Slides would resemble *“mutserendende”* a game where children would slide downwards on a sloppy smooth rock with the lubrication of *“nhanzva”*. As for swings, the children would hang from the tree branches.

The schools under study have been pragmatic. They have taken a “develop and keep” approach where those play activities from home might have been incorporated in the school activities with some modifications. Perhaps it is the very notion of the ‘school’ that has restricted the use of such trees or *‘mutserendende’* or the idea of what adults ‘thinking about school’ deem to be appropriate for children. Seemingly as discussed in section 6.3.3.1 the authorities have little insight into ECD so perhaps no thought was given to accessing materials that were more representative of indigenous practices.

Choices have been influenced by equipment fashioned on western notions of outdoor play equipment. Another possibility that might have influenced the choice of equipment is the growing movement in the western world, for example, to curtail what is seen as ‘risky’ play. These trends are based on changing ideas of children and childhood where children`s play is expected to be safe (Bruce and Meggit, 2010; Tassoni and Beith, 2005; Morisson, 2008). The height of the floating bridge, for example, might have been limited by notions of unsafe risky play.

The materials have been made of metal for durability both at Vambai and Tariro schools as confirmed by the school heads Mr Zhou and Mr Sigauke. Those at Kurai are made of wood; a material which is readily available around the school area and also easy to maintain. The equipment for the three schools was made by the schools themselves. In the interview, Mr Sithole said, *“all this equipment you see was made by the parents. Our school does not have funds so we have to use parents”* (15/01/16). Making of play equipment by schools using available materials from their communities resonates with the socio-cultural idea of mediation using cultural tools to enhance learning (Rogoff, 2005).

Given that schools have made their own outdoor equipment it is a pity that more outdoor equipment has not been provided. Findings revealed that play materials seem to be insufficient for the number of ECD children. The pertinent question that one can raise from this situation of limited availability of play materials is “If the ECD teachers recognise that children need to play, why there is not sufficient play materials for children”. For example, Vambai and Tariro Schools each have a see-saw, merry- go round and floating bridge. At Kurai School, however, the outdoor play area comprises of only one see- saw and swing. This scenario of having limited play equipment is not consistent with the western ECD notion which suggests that each child should have access to play equipment and adequate play spaces (Tassoni and Hucker, 2005; Minnet, 2010). For quality learning to be realised in ECD, there is need to have adequate and safe play materials (Tassoni and Beith, 2005).

However, to justify availability of few play materials at the schools it can be argued that in Shona culture, children grow collectively sharing whatever is available irrespective of the quantities. This is a recognised cultural practice and integral to traditional child rearing practices. As the children share the few materials available, they tease out a problem and engage as a community of learners assisting each other to construct knowledge (Rogoff, 2002). Where the children find difficulties in performing an activity, for example, climbing up the floating bridge or swing, they help each other and also learn skills like turn taking. This was noticed during observations of outdoor with both Mrs Shava on 20/01/16 and Mrs Gumbo on 25/01/16 respectively.

Social learning is a process entrenched in the socio- cultural theory. It is,

> a collective process for accumulating new knowledge essential for problem solving, decision making and community development. Social learning can be a powerful force for change, through collective interaction at the community level. It involves critical thinking about the underlying assumptions concerning stakeholder action, values and claims to knowledge (Standa-Gunda et al., 2003, p. 315- 316 cited in Msila and Gumbo, 2015, p. 99).

From the above assertion, critical thinking and problem solving in ECD learners is encouraged as they engage in their activities with limited equipment. Children pose problems for each other, for example, playing riddles and assisting each other to solve the problems. During indoor play for Mr Hove (03/11/15) children were observed assisting each other to strap a doll on the back as they played *"mahumbwe".* Children change activities and solve problems when playing. They explore how they can accommodate each other on the equipment available and at the same time developing cooperative skills. According to MacNaughton (2003, p. 49),

> ...critical constructivists reject the idea that meaning, knowledge and therefore, learning is uniquely individual, value free cognitive pursuit. They believe that knowledge is and thus learning are always social and embody ethics, values and politics.

As children play, they engage in three levels of child centredness. Malcom and Keane (2001) asserts that there are three levels through which an ECD teacher can show that active learning is central to the incorporation of IK which leads to critical thinking. This happens according to the complexity of the activity, namely caring for children; child centred pedagogy; and child- centred outcomes. Thus, IK and its pedagogies can be incorporated considering children`s needs and interests through the use of appropriate play pedagogies and play equipment.

Thus, for Malcom and Keane (2001) the third and highest level (children`s outcomes) is where the children are allowed space to develop and critical thinking is shaped by their experiences, cultures and the embracing of IK. According to Vygotsky (1978, p. 101) “Every function in the child`s cultural development appears twice: first on the social level, and later on the individual level; first between people (interpsychological) and then inside the child (intrapsychological)”.

On 27/11/15 I observed Mrs Sibanda sitting children in groups as they played nhodo during outdoor free play. The children were later freed to play the game as individuals. Thus, allowing children to sit in groups and engage as groups during outdoor activities first then proceed to problem solving as individuals allow the ECD children to develop critical thinking (Vygotsky, 1978). Sitting children in groups as I observed Mrs Sibanda on 25/11/15 seemed like an incidental occurrence. The teachers seemed not to reflect on their practice and how it could be informed by IK and indigenous pedagogies. However, grouping ECD children (3-4 years) and treating them as a homogenous group may not be considered a good pedagogical practice for the children are egocentric and engage in solitary and parallel play mostly (Tassoni, Beith and Hucker, 2005).

In this theme, I explored the tensions between IK and pedagogies. These tensions result in a number of challenges for teachers. Most have difficulties separating IK and forms of teaching. It is apparent that especially in the ECD context there is a fine line between what is viewed as IK and what is seen as appropriate ECD pedagogies. This blurring of IK and pedagogies is further exacerbated by the notion of playful pedagogies. The notions of co-construction of knowledge and sustained shared thinking are overpowered by a more formal, didactic approach to ECD where IK is marginalised. This also becomes obvious when exploring teachers' understandings of the ECD learning environment. The learning materials are limited and little thought has been given to how these can be incorporated into the learning day to ensure a strong presence of IK and drawing on culturally appropriate. There are many explanations for these current tensions some of which have been explored in theme 2. One of these tensions will now be further interrogated namely the influence of ECD policies on the inclusion of IK in the curriculum.

6.4 IK and ECD policy

Quality is something that is difficult to describe as it is elusive and at times subjective. Quality ECD practice has been alluded to in chapter 2, sections 2.7 of this thesis. However, for ECD programmes and practice to be of good quality, they also need to be informed by sound policies (Follari, 2011). Such policies can inform ECD teachers on what IK entails and on how to incorporate IK into their pedagogical practices (see chapter 2, section 2.7.1.2 and 2.7.1.3).

From the findings, it emerged that the teachers have different views on whether they are guided by policy or not in the incorporation of IK into their pedagogical practices. Table 6.4 shows whether ECD teachers and school heads are guided by policy or not in the incorporation of IK. The classification is based on the teachers` assertions.

Table 6.4: Teachers` responses on whether they are informed by policy on IK

NAME	INFORMED	NOT INFORMED
Mr Hove		X
Mrs Dube	X	
Mrs Sibanda		X
Mrs Shava		X
Mrs Gumbo		X
Mrs Moyo	X	
Mr Sithole		X
Mr Zhou		X
Mr Sigauke		X

As Table 6.4 shows, the majority of teachers do not think that policy offers guidelines for the inclusion of IK into their daily practice. They are not aware of the ECD policy in Zimbabwe and if it focuses on the use of IK or not, hence they are not informed by policy. These teachers cannot be held to accountable for failure to embrace IK as it in fact emerged from the document analysis (see Education Act 1987 amended 2006, SI 106 0f 2005 and ECD syllabus, 2012) that there is no comprehensive ECD policy to guide the incorporation of IK. The country mostly relies on patch work circulars that are used to address an emerging issue at a specific time.

The policy documents that inform the inclusion of IK are SI 106 of 2005 which gives skeletal guidelines to ECD practice in Zimbabwe. It is mostly used in conjunction with Secretary`s circular 14 of 2004, Director`s Circular 12 0f 2005, and Director`s circular 48 of 2007. This observation was confirmed by the teachers who cited various circulars as the ECD policy showing that they are not aware of the difference between policy and policy circulars.

Mrs Shava stated in the survey that she is informed by various circulars like Secretary`s circular 14 of 2004, Director`s circulars 12 of 2005 and 48 of 2007. Yet in the interview on 14/01/16 Mrs Shava said,

> I don't remember coming across any section in the ECD policies that deal with IK though some aspects like curriculum are covered in Statutory Instrument 106 of 2005.

Because of the possibility that she asked someone for assistance when completing the survey, I marked her response as not being informed by policy as indicated in table 6.4 above. I also came to this conclusion based on other remarks made during the interview. Mrs Gumbo also expressed similar confusion. She wrote *"although we hear much talk of IK, there is nowhere it is written to guide us on how to use it in our daily activities"* (see table 6.4*).* Mrs Gumbo corroborated her view in the interview on 14/01/16 by saying,

> I have studied almost all the ECD policies at Marymount Teachers` College but I have never come across where the policies mentioned anything to do with IK. If ever we happen to use it, then it will be coincidental or the teacher`s creativity.

In addition, during the interview on 31/10/15, Mr Hove said that he uses IK in terms of media, content and methodology. He bemoaned the limitation in the use of IK caused by the current ECD policy which he believes emphasises the use of English and other western knowledge, for example, technology such as computers even where there are no resources. Mr Hove said *"there is no place for IK in the ECD policy as there is no deliberate mention of it (IK) in such policy"* (31/10/15). However, in document analysis, IK can be implied in a covert fashion, for example, on the language issue where ECD teachers are encourage using language best understood by the child without specifying (Education Act as amended, 2006; SI 106 of 2005).

Mrs Sibanda shared the same thoughts as Mr Hove, saying, "*I am not guided by the ECD policy because I have not seen where it focuses on IK"* (13/11/15). This remark by default implies that she wants to make use of IK and as indicated previously she does include some IK into her ECD practices. Mr Sigauke also added his voice during the interview on 16/11/15 saying, "*Unfortunately, I do not remember anywhere in that policy where it focuses on IK, so I cannot say teachers are guided by policy on the incorporation of IK in ECD."*

From the above assertions, it is clear that according to the teachers there is a gap in ECD policy on the incorporation of IK in ECD. From the document analysis, the issue of IK is conspicuously absent in the Statutory Instrument 106 of 2005 which gives guidelines to ECD practice and this confirms the ECD teachers` assertions.

Document analysis confirms that the policies are silent on the inclusion and use of IK in ECD. The use of the mother language, for example, in ECD is implied as it is only stated that ECD teachers can use the language best understood by the children during instruction (Ministry of Education, 2005). Such sentiments expose policy inconsistences in ECD. The ECD policy does not resonate well with Haddad and Demsky`s (1995) definition of policy that says policy is an explicit or implicit single or group of decisions which may set out directives for guiding future decisions, initiate action or guide implementation of previous decisions. Thus, from the responses it is clear that the policy lacks any input or benchmarks on the incorporation of IK in ECD.

However, Mrs Dube had a different view saying that she is guided by the ECD policy on the use of IK. Corroborating her response in the interview (31/10/15), she says "*Yes, I am guided by the ECD policy in using IK in ECD".* However, upon further interrogation, the teacher professed ignorance on how the ECD policy informs the use of IK. Mrs Dube show that she has a reasonably good understanding of IK but she has never checked to find out the place of IK in the ECD policy.

In addition, Mrs Moyo wrote in the survey (12/11/15) that she is guided by the ECD policy in the use of IK but felt that the policy was optional as it depends on the environment. In the interview on 13/11/15, Mrs Moyo mentioned,

> IK is not adequately used in ECD. Maybe because formal ECD programmes started (abroad) in the western countries, so they provide, suggested activities and media and our ECD policy has failed to locate the place of IK in the ECD programmes.

From the above discussion, it emerged that the ECD teachers do not consider themselves to be informed by the ECD policy in the incorporation of IK in their pedagogical practices. Mr Sithole, one of the school heads in the interview on 15/01/16 said,

> Like any other level taught in the school, if the teachers use IK in their lessons, they are guided by policy. Remember, these teachers are specialists in their area.

However, upon further interrogation, he confessed that he had not interrogated the policy. Mr Zhou another school head professed ignorance on the ECD and IK policy. He, in the interview on 02/11/15 said, "*I am not very conversant about ECD. In fact my Teacher in Charge is responsible for that but I don't remember any document in our education system referring to IK".*

From the two school heads` responses (Mr Sithole and Mr Zhou) it seems as if School Heads take ECD practice for granted and they don't make a deliberate effort to be conversant with the ECD trends and practices. The Heads leave the area to Teachers in Charge, hence their limited knowledge on the ECD policies.

In summary, drawing from both document analysis and the participants responses policy does not appear to be very informative regarding the inclusion of IK into the ECD curriculum. Given that most teachers have been taught very little about IK and find it difficult to bridge the tensions between IK and global knowledge (see theme 1) it is not surprising that the limited information in the policy documents with regard to IK offers teachers no further clarity.

Challenges faced by ECD teachers concerning understandings of IK, tensions between indigenous and global knowledge and their inclusion of IK into their pedagogical practices justifies the third research question, What strategies can teachers suggest for incorporating IK into their pedagogical practices? These strategies are interrogated in the final theme.

6.5 Strategies identified by Teachers for the Incorporation of IK

An exploration of the strategies that can be adopted to incorporate IK in ECD teachers' pedagogical practices is to answer the third research question, "What strategies can be identified by teachers to incorporate IK into their pedagogical practices? From the teachers' responses to the survey and interviews, various strategies such as policy review to incorporate IK, engagement of resource persons, staff development through workshops and the realignment of the teacher education curriculum to incorporate IK emerged. Each one is interrogated.

6.5.1 Policy review

From the responses by teachers, they unanimously agreed that the ECD policy needed to be reviewed to strongly reflect an IK incorporation matrix. In the survey, Mr Hove wrote, *"ECD policy should be revisited to clearly articulate IK issues as the current one is silent about it"* (30/10/15). He corroborated this in the interview on 31/11/5 saying *"For successful incorporation of IK to be realised, there is need to have an ECD policy which is clear about that."* Mrs Dube also wrote, *"The ECD policy needs to be clear on the use of IK. If we use IK currently, we are just doing it through our subjective ability to interpret the curriculum"* (30/10/15).

Mrs Moyo also stated in the survey (12/11/15), *"I need to be guided by policy to be able to effectively incorporate IK into my day to day teaching".* In the interview on 13/11/15, she asked rhetorically, *"How can I be expected to struggle to include something that is not asked for by the policy? Let the policy be as clear as the coming of tomorrow".* Mrs Sibanda added her voice in the interview on 13/11/15 when she said, *"we need to be clearly guided so that we can meaningfully incorporate IK into our practices. This guidance can only come through a comprehensive policy."* Mrs Shava wrote in the survey (13/01/15) "If the government is serious about this IK thing, there is need to have a clear policy on how and what to be incorporated as IK". In the interview on 14/01/16 she corroborated her view saying *"We need policy, policy not cheap talk. We work with policy, that is what we* *are constantly reminded to use by the heads and Inspectors but this seems to be elusive".*

From the evidence presented it is clear that all the teachers concurred that policy needs to be revisited. The teachers can easily influence the change in micro policy which is actionable at their schools (Haddad and Demsky, 1995). However, with macro policy it is a long term strategy. It is interesting to note that in their responses teachers showed very little initiative to become proactive; to find out more about IK or to consider different strategies of including IK in their daily practice.

6.5.2 Staff development

Another strategy that the ECD teachers unanimously suggested to enable the incorporation of IK was staff development. Teachers felt that they need to be exposed to workshops. Mr Hove in the interview on 31/10/15 said, *For teachers to fully and knowingly incorporate IK in their teaching, they need to have staff development programmes like workshops.*

Mrs Dube wrote in the survey (30/10/15), *"I suggest that we should be staff developed through workshops."* In the interview on 31//10/15 she reinforced this sentiment, *"Workshops should be done so that teachers have a full appreciation of IK and understand how to better incorporate it in their teaching."*

Mrs Moyo wrote in the survey (12/11/15), *"We need to have workshops on IK so that all teachers are fully equipped to use it during teaching".* In the interview on 13/11/15, she said workshops to assist teachers on the incorporation of IK should be done at various levels such as national, province, district, cluster and school level to make sure that no one is left behind.

In the survey, Mrs Sibanda wrote "*I need to be exposed more to IK, may be through workshops" (12/11/15).* In the interview on 13/11/15, she said, "*though workshops may not be adequate, they also assist to expose us to IK. However, the most ideal* *thing is to send teachers to refresher courses."* Mrs Shava also wrote in the survey that, "I *suggest having workshops specifically on IK and how it can be incorporated into ECD curriculum"* (13/01/15). In the interview she too mentioned, *"we need to have some series of workshops to make sure we have all been exposed to it and we are doing almost similar things.* She went on to say, "*Having refresher courses maybe during school holidays will also assist in having more time to learn more about IK."*

Mrs Gumbo supported Mrs Shava's suggestions by saying that teachers need both workshops and refresher courses to hone their understandings of IK. In the interview on 14/01/16 she said*, "I suggest that the Ministry of Education embark on workshops teaching us on the incorporation of IK. They should also send teachers for refresher courses that are a bit long so that they have ample time to learn more about IK."*

Mr Sigauke wrote in the survey (12/11/15)*, "The Ministry of Education should provide workshops on IK to teachers".* To corroborate his view in the interview he said*, "We need to be exposed to workshops on IK. The workshops should be cascaded from national level down to school level"* (16/11/15).

From teachers' assertions, workshops need to be done so as to expose the teachers more to IK and how it can be incorporated into their pedagogical practices. Teachers also advocated that the workshops should not be a once of thing but should be offered at different levels starting with the Ministry of Education. They also claimed it should be the responsibility of the Ministry to assist in cascading the information to all. It is of concern that teachers place so much importance on workshops as workshops frequently do not reach the desired outcomes. Teachers find it difficult to transfer what they have heard or experienced in a workshop to their daily practice (Dixon, Excell and Linington, 2016). Thus workshops have dubious success rates.

It is also concerning that teachers place so many of their expectations on the Ministry of Education, especially when they have all acknowledged that the ministry has failed to provide reasonable guidelines in relation to IK and its implementation in the classroom.

6.5.3 Provision of literature

ECD teachers also suggested that literature on IK should be made available to the teachers. Mr Hove wrote in the survey, "*Literature on IK should be made available so that teachers can use*." In the interview on 31/10/15 he said,

> Literature on IK should be made available to teachers for use during teaching. The indigenous games and play should be documented. In addition, in the absence of literature, resource persons like adults who are custodians of IK should be called to assist during teaching.

Mrs Dube reiterated Mr Hove`s idea. In the survey, she wrote*, "Literature on IK should be made available for teachers to use".* In the interview on 31/10/15 she mentioned that,

> There is need to document IK that is suitable for ECD. Literature is needed so that teachers can have somewhere to start.

Mr Sigauke was also of the view that literature on IK should be provided to teachers. In the interview on 16/11/15 he said, "*because of the need to re- awaken IK, teachers need to be provided with literature since IK has been gradually dying."* Mr Sithole also wrote in the survey that for the successful incorporation of IK, teachers need to have access to literature. In the interview on15/01/16 he said,

> For both implementation of the incorporation of IK and its preservation, it is prudent to give literature to the teachers and other stakeholders such as Heads and Schools Inspectors.

The above contributions by participants give testimony to a need to have literature on IK so that teachers can use it. This will assist them to have a good understanding of IK and incorporate it better into their pedagogical practices. The ideas resonate well with research in Ghana by Almor (2016), Abdulai (2016) and in Botswana by Bose and Seetso (2016). This research confirms the need to document indigenous plays, songs or rhymes as way to enhance the incorporation of IK into ECD pedagogical practices.

However, it is worth exploring some of the gaps in the teachers’ answers. The teachers’ responses focused on what could be done for them; perhaps strategies have to be found so that teachers could focus on what they could do to deepen their own IK and to explore additional strategies so that they can successfully share IK with the children they teach.

6.5.4 Thoughts on alternative strategies

Factors that were not mentioned by participants, namely what they themselves could do to access more information related to IK, the place of the curriculum and the role of parents and the community were not possible strategies considered by the participants. Teachers seemingly did not see a role for themselves in sourcing IK and exploring ways of sharing this knowledge with children. They also did not seem to question the subject–based curriculum (see chapter 2 section 2.9) which is a deterrent for adopting a more play-based pedagogical approach. Though many mentioned the subject based approach there was little suggestion that this approach could be altered.

IK is local knowledge, related to cultural practices and is thus steeped in all community members. Yet again, no teacher even hinted at the possibility of forming a partnership with parents or community elders who perhaps have better insights into the local customs and who might better be able to share this knowledge with the children. When there is active participation in schooling children achieve better results (Epstein, 2001).

Teachers appear to have very little voice and agency. They do not see a role for themselves in shaping or changing the ECD curriculum. In the 21st century and especially within the African context where there is a huge campaign to decolonise education one must query why teachers feel so lacking in agency (Ferrante, Seedat-

Khan, Kaziboni and Uys. 2016). It might be worthwhile for them to consider that contemporary understandings of practice should not necessarily lead to polarisation or only one way of doing things. As Dahlberg, Moss and Pence (2007) suggest the notion of 'both/and' rather than the more dualistic 'either/or' approach could be an additional way of successfully including IK in the early childhood curriculum.

6.6 Conclusion

The chapter analysed findings in order to establish the place of IK in ECD and how it is included in the ECD teachers' practices. Data was analysed under four themes which included ECD teachers` understanding of IK; Tensions between indigenous knowledge and pedagogies; ECD policy and IK and Strategies identified by teachers for the incorporation of IK.

From the analysis, it emerged that ECD teachers have varied understandings of IK ranging from a reasonable to a limited understanding. It also emerged that there is confusion between what stands for IK and what stands for global knowledge. Global knowledge forms are given preference over IK. Findings revealed that IK is given a peripheral role in ECD and where it is used, it is often incidental. Teachers do not readily include IK as a planned teaching strategy. In addition, teachers conflate IK and the common strategies used to share IK with children such as stories, rhymes and games. Because recognised ECD pedagogies are very similar to many indigenous games, teachers find it hard to distinguish between content and how to teach content. A consequence of this is that play based pedagogies are also marginalised and replaced by more formal approaches to ECD.

The ECD policy documents lead to further confusion and marginalisation of IK as there is no clarity on what constitutes IK and how to implement it successfully in the classroom. Teachers appear to be in limbo. They acknowledge the importance of IK but appear to lack the agency needed to change their practices at classroom level.

In the final chapter I reflect on the research design and revisit the research questions. I present a summary of the findings in order to answer the research questions. Some conclusions are presented and recommendations for further research are offered.

CHAPTER 7

THE PLACE OF IK IN ECD: A PARADIGM SHIFT

7.1 Introduction

The purpose of this study was to establish ECD teachers` perceptions on the incorporation of IK into their pedagogical practices, their understandings and suggestions on how they can fully embrace IK into their ECD programme. In order to establish these perceptions, the following research questions were used:

Main Research Question

How has indigenous knowledge been understood by Early Childhood Development teachers in Zimbabwe and incorporated into their pedagogical practices?

Sub Questions

1) What are the teachers` understandings of indigenous knowledge?
2) How and to what extent does indigenous knowledge inform teachers' classroom practices?
3) What strategies can be identified by teachers to better incorporate IK into their pedagogical practices?

This chapter presents an overview of the research design and the summary of an analysis of findings in relation to each research question. In addition, conclusions and recommendations as well as suggestions on the incorporation of IK in the ECD teachers` pedagogical practices are discussed. Suggestions on areas for further study are also presented.

7.2. Brief Summary of the Thesis

This thesis explored through a qualitative paradigm ECD teachers` perceptions of indigenous knowledge and how this was realised through their pedagogical practice. I drew on a wide range of literature to firstly interrogate the contested meanings of indigenous knowledge and then to explore what constitutes quality ECD practice. I further examined a number of Zimbabwean education policy documents to determine the place of IK in the Zimbabwean curriculum as well as the official ECD guidelines. For the purposes of this study, IK was viewed as being local or traditional knowledge. It is knowledge that is held and made use of by people who regard themselves as indigenous to a particular place. This knowledge can be in form of games, song, and cultural practices such as child rearing.

Quality ECD practice is seen as one that acknowledges the importance of holistic development and learning that is both culturally and contextually relevant. I drew on sociocultural theory to highlight the importance of social interactions and the specific role of teachers in supporting early learning. From a socio-cultural perspective the ECD programme should be underpinned by a playful pedagogical approach to teaching and learning.

An analysis of the Zimbabwean policy documents revealed that though the concept of IK is mentioned in the documents, there are no specific guidelines that talk to what and how it should be implemented, especially within the ECD phase. ECD curriculum guidelines further revealed that a top down subject orientated approach was adopted in the implementation of the ECD programme.

One of the major findings, therefore, is that teachers find themselves in an ambivalent position. Most are aware of the value of including IK in their classroom practices but they find the lack of policy direction in this regard and the subject orientated curricular approach to be a huge barrier to implementing rich play based pedagogical practices. In the schools observed, ECD is practised in a more formalised way. The children sit at desks, follow a timetable and receive a lot of instruction; the choice of play materials is limited which negates the richness of free play as a valuable learning experience. This, despite the fact that play is regarded as central to ECD learning (SI 106 of 2005; MOSEAC, 2012).

However, teachers are including some IK and indigenous practices into their teaching strategies. It emerged from the findings that most teachers could not effectively incorporate IK into their pedagogical practices. In cases where IK was incorporated, it was limited and coincidental, for example, their use of folk stories and learning materials from their communities. It seems as if inclusion of indigenous knowledge sits in opposition to the inclusion of global knowledge in the curriculum. Again, this is not surprising because analysis of findings revealed tension exists between the understandings of indigenous and global knowledge. The result is a dichotomy where the current ECD Western approach and the inclusion of practices are running in a parallel fashion. This calls for the need to integrate the two forms of knowledge into one system without necessarily competing for dominance. The main findings are briefly summarised to answer each research question.

7.2.1 ECD teachers' understandings of IK

To answer research question 1 which reads, What are the teachers` understandings of indigenous knowledge? it emerged that of the nine participants who participated in the study, only three showed a reasonably good understanding of IK. The majority showed they have partial understanding of IK (see table 6.4) with one participant having limited insight. Thus, it can be concluded that the ECD teachers have gaps in their understandings of IK. The gaps were revealed as some of the teachers could not articulate what IK is, its mode of transmission or give any forms of IK.

The study revealed that ECD teachers varied level of understanding of IK reasons could include their own backgrounds; home, community and education. These IK understandings of the ECD teachers are both contextual and historical. Most teachers also mentioned that they had not had much exposure to the concept of IK during their teacher education courses.

Those ECD teachers who showed a reasonably good understanding were university graduates (Mr Hove, Mrs Dube and Mr Zhou). ECD teachers with reasonably good understanding showed that they could articulate IK issues reasonably eloquently.

Teachers who were Diploma holders showed partial to limited understanding of IK. Most of these participants indicated that they were not thoroughly engaged in aspects of IK. It emerged in the findings that there is lack of linkages in the Zimbabwean education system as exposed by the blackspot in the system (see figure 6.1). The so-called blackspot has influenced both the ECD teachers' understandings of IK and their ability to incorporate it (IK) into their pedagogical practices as some of the teachers do not seem have grounded knowledge on IK.

The study also revealed that IK is becoming more and more of a topical issue in the Zimbabwean education system as schools are expected to have culture centres or huts (see chapter 5) in an attempt to address the inclusion of IK and practices in the schooling curriculum. However, no clear guidelines have been given on how this inclusion should happen within the curriculum. Oguniyi (2007) asserts that indigenising education is a reaction to political historical experience besides other reasons. However, for successful indigenisation of the curriculum teachers need to be well prepared.

Findings from the study have shown that this is not the case. There are varied definitions and perceptions on IK and this has manifested in tensions among the participants as they differ in their perceptions of IK. Tensions between understanding of IK and global knowledge were also highlighted in the study. Teachers viewed IK differently in that some viewed it as a political rhetoric, meaningless or of no academic value and others view it as the springboard for ECD teaching and learning. The participants contended that global knowledge is suppressing IK.

On knowing about IK as taking an inferior position, in this study, one teacher feigned ignorance. When asked about IK she confessed to being ignorant and said that she did not make use of indigenous strategies. Yet, when observed she included indigenous materials into her lessons. Such, actions of dissociating oneself from IK resonates well with the claims of some academics who view the use of IK as backwardness and not worthwhile knowledge (*The Herald*, 14 June 2017). The view that IK is not worthwhile might be unintentionally supported by the Education System as there is a lack of appropriate IK activities and content suggested in the ECD policy documents. And teachers have made it very clear that they expect to get official guidelines on how to include IK in their teaching practices.

An important reason that has resulted in the marginalisation of IK is lack of consensus on its definition among educationists and scholars. The question of whose knowledge has emerged to be more dominant is a political one and this resulted in challenges to the adoption of IK in the classroom. The colonial past of the country has led the Zimbabwean education system to adopt a somewhat British system (Zvobgo, 1996) thereby undermining the IK that is readily available in the communities. Even the indigenous people view it as being of low academic value (Msila and Gumbo, 2015).

Parents as stakeholders also believe that for ECD children to be well educated they need to be exposed to pro-western activities (Dyanda, et al, 2005). The problems that Zimbabwe faces in restructuring its education system are partly embedded in colonial legitimacy (Shizha, 2011). Thus, such brainwashing has led to the undermining and suppression of IK.

7.2.2 ECD teachers’ pedagogical practices and IK incorporation.

To answer research question number 2 which reads: How and to what extent does indigenous knowledge inform teachers’ classroom practices? it emerged from the study that ECD teachers` used IK during some of their lessons. However, the use of IK was minimal except for two teachers (Mr Hove and Mrs Dube) who had a reasonably good understanding of IK. In cases where ECD teachers used IK, it appeared as if it was coincidental and not purposeful. They mainly included IK during play periods where children engaged with the learning materials; perhaps the inclusion of IK was only because they were locally available.

In the study it emerged that ECD teachers could not fully incorporate IK in their pedagogical practices as they remain strongly biased towards the western ECD practices. Educational frameworks remain western in their foundation and hence are not able to adequately incorporate IK and `ways of knowing` (Morgan, 2003; Okolie, 2003).

Schaefer et al (2004, p. 65) suggest that,

> the pressures of globalisation in the realms of culture and technology; the lack of contemporary research on IK has affected its incorporation in the education system.

The study revealed that it was difficult for ECD teachers to incorporate IK in ECD because of the subject based curriculum which has segmented knowledge into too many learning or curriculum areas whereas IK is holistic in nature. The ECD teachers could not handle IK as a cross cutting issue in their curriculum as they claim that the timetable is too congested to accommodate it (IK).

The study also revealed that there is conflation of IK content and pedagogies. The teachers could explain IK in terms of the games and songs. However, they could not link them with various knowledge fields such as child rearing practices. This is also because IK content and pedagogies are difficult to separate as there appears to be a very thin line separating them. The playful pedagogies as the sociocultural theory suggests, if applied in the children`s culture, they become part of IK. However, teachers despite providing play materials seem not to intentionally support playful teaching and learning. In cases, where play is adopted, it is to a lesser extent didactic as the teachers do not seize the opportunities to teach new knowledge as in some cases they will be busy doing something else as the children engage in play.

7.2.2.1 Learning materials and IK

The study revealed that some indoor learning materials used are found in the communities in which the schools are located. These learning materials include musical instruments, models, and traditional kitchen utensils. Sagnia (2004) emphasises the use of locally produced toys in ECD so as to develop the children`s cognitive skills and for the continuation of IK. However, though such materials are found in the classrooms, it can be concluded that they are not there because they are IK appropriate. Rather teachers improvise on materials when teaching possibly as a way of cost cutting measures. These learning materials are taken as a substitute for the unavailable western materials. Teachers sought materials to support their teaching without considering if they had any value in the promotion of IK. Thus the materials availability is coincidental.

The study also revealed that the charts used in the classes are western biased. It was observed that on alphabet charts and number lines, the ECD teachers mainly used pictures of exotic fruits and animals not found the areas. They could have use fruits such sugarplums or `*matohwe*` instead of apples or grapes. Animals like tiger were used on alphabets or naming groups yet they are unknown to ECD leaners. Animals like lions are found in game parks and children hardly get to such places. However, some would argue for it because children will learn knowledge. ECD teachers rely on donated charts such as those provided for the Early Reading Initiative (ERI) that are not IK compliant. In some instances, the teachers even copy those charts. These conflicting views from teachers might become an example of how western and IK can be integrated. Thus knowledge can be partly contextual and culturally appropriate and partly extending children's knowledge to enable them to fit into a global world.

7.2.2.2 Outdoor learning environment

In the children's cultural settings they would play their games on natural things such as trees and rocks. Children would play `*mutserendende*` on rock surfaces and swing on tree branches. This confirms that children develop in a somewhat universal manner irrespective of their culture. Thus, a `develop and keep` approach has been adopted on activities such as sliding and swinging. The same approach could also have been applied to fencing. The schools were wire fenced but the notion of creating a barrier such as a "fence" is not a new phenomenon as it was done in the traditional Shona society as far back as the 16^{th} century (Msila and Gumbo, 2014).

I also concluded that even where there were some IK relevant materials like the culture hut, they were only there for display as it was a requirement by the Ministry of

Primary and Secondary Education to have them. Simply, there was little evidence of their use as witnessed by tall grasses and a lot of dust gathering inside.

7.2.2.3 ECD Policy

The study revealed that the ECD policy does not embrace IK. The ECD teachers suggested that the policy is silent on the issue of IK and they are not guided by the policy. They felt it had no useful input on the inclusion of IK. Neither therefore does it guide their pedagogical practice. It is against this background that it emerged some ECD teachers and school heads are not conversant with the ECD policy. The teachers worked without making reference to policy. Though some ECD teachers claimed that they were guided by the ECD policy in the use of IK, it is more likely because of policy's silence on IK they relied on their own intuition.

In the study, it emerged that the ECD administrators such as the school heads were not ECD specialists and thus could not articulate the link between IK and ECD practices. In fact, it appears as if ECD has emerged as an opportunity area where some policy makers like education inspectors (EI) joined the ECD area not because of competency or interest in the phase of education but because there are employment opportunities. School heads accepted that they were not conversant with the ECD policy. This pointed to gap in their practice as they could not assist the ECD teachers to incorporate IK in their pedagogical practices. It is also for such reasons that they have failed to identify learning materials that are cultural suitable in ECD as they are provided with donations.

7.2.2.4 Strategies identified by teachers for the inclusion of IK

In the study, it also emerged that teachers have no voice or agency. It seems as if critical thinking and reflection are not part of their practice. They need to be given the opportunity to air their views on the ways to best incorporate IK. Given the opportunity, they can inform policy and practice. Teachers identified policy review as the first strategy to enhance the incorporation of IK into their pedagogical practices.

In addition to policy review, teachers felt that capacity building in them is critical. This capacity building can be done through staff development programmes such as workshops. The staff development programmes has to include the ECD teachers, school heads and Schools Inspectors. Teachers also suggested promotion of ECD specialists to posts in the Ministry so that they can inform both policy and practice more effectively.

In the study, it also emerged that there was need for the provision of literature that could be used in ECD. This literature needs to be IK compliant. Teachers themselves could have an input on the literature that is needed to avoid having irrelevant literature thrown on them.

7.3 Recommendations

IK in ECD programmes play a significant role in providing the context in which the ECD children develop holistically. Based on the findings outlined in chapter 6, ECD teachers` suggestions and findings from literature, a number of recommendations have been made to enable ECD teachers to effectively incorporate IK into their pedagogical practices. I make the following recommendations with regards to, firstly, ECD practice and secondly ECD policy.

7.3.1 Consolidating the place of IK in the ECD programme

The ECD programme in Zimbabwe should incorporate IK and treat it as an important strand of knowledge without undermining it (IK) at the expense of global knowledge. A balanced approach to the two forms of knowledge should be sought where necessary. Thus, the place of IK should be explicitly outlined in the ECD programme. This change needs to be introduced at policy level and then carried through to all tiers of the education system to enable ECD teachers to be more knowledgeable about and confident to include IK in their everyday practice. Policy change is, therefore, pivotal to the inclusion of IK in the ECD programme.

7.3.1.1 ECD Policy and IK

It is recommended that a clear policy on the incorporation of IK in ECD be drafted. Wide community consultations are necessary to effect realistic policy changes as IK is drawn from local and cultural practices. Stakeholders such as parents, traditional leaders, teachers and other ECD experts should be instrumental in shaping the comprehensive ECD IK policy. Aspects to consider might include:

1. The nature of the IK to be incorporated into the ECD curriculum.
2. IK competencies expected by ECD teachers and children.
3. Resource allocation for including IK in the ECD programme.
4. How IK and ECD pedagogies can be integrated to ensure a quality ECD programme.

These consultations would yield better results through awareness campaigns for stakeholders' familiarisation on the ECD policy and implementation on IK. The ECD teachers, for example, could be requested to record indigenous practices for possible infusion into the policy.

7.3.1.2 Adopting a play-based pedagogical ECD approach

There are as many approaches to ECD as discussed in chapter 2 (see section 2.7). The subject based approach currently implemented in Zimbabwe ought to be modified and a play based pedagogical approach informed by socio cultural theory introduced. Such an approach is culturally and contextually relevant and as such allows for the easy inclusion of IK into the curriculum. Because content and pedagogy is so closely interwoven (see section 3.3.4). This allows for the smooth incorporation of IK. This enables children to more easily comprehend knowledge which is not compartmentalised as with the subject based approach. Integration of IK and pedagogies will also ease some of the tensions that currently exist between IK and global knowledge in the roll out of the ECD curriculum. This type of approach will also necessitate considerably policy adaptation.

7.3.1.3 Promoting ECD specialists to decision making posts

Based on the finding that School Heads and Inspectors are not particularly conversant with the ECD policies and practices; for effective policy planning and implementation it is prudent to promote ECD specialists to posts such as Directors and Inspectors and School Heads.

Since ECD is a new programme, it is more unlikely to get ECD specialists who have a lot of work experience or who have risen through the ranks to posts of Schools Inspector and above. Thus, for ECD to be represented at the top, government could put a waiver on the experience for ECD post promotions. Such requirements like the period of teaching experience can be reduced and should also allow for ECD specialists to compete on their own for such posts. This move will avoid distortions on policy formulation and implementation.

7.3.2.3 Policy

Policy change is a long term goal. However, a more realistic short term goals, that could be implemented at district level could be the introduction of some of the teacher's identified strategies to support the inclusion of IK. These include

7.3.2.4 The provision of literature

For ECD teachers to have an unquestionable understanding of IK appropriate literature should be produced and made available to them. Ideally, the literature needs to be home grown and ECD teachers should be invited to make contributions on the generation of such literature so that the IK is culturally and contextually appropriate. The literature provided should be for both for teachers and the children, in the form of appropriate storybooks.

7.3.2.5 Staff development

Based on the findings, there is need for staff development of ECD teachers and other stakeholders such as School Heads and Schools Inspectors so that their understanding of IK ECD can be enhanced since they are both the policy implementers and enforcers. Nsamenang (2009 p.119) has called for “the training of `culture informed and context-tuned “experts” especially with the *nerve and adroitness* to dare step out of the Euro-Western box to articulate their own or creatively gain from donor- posited guidelines….” Thus, a sense of agency and creativity should be inculcated in the ECD teachers.

Staff development can also assist the ECD teachers on the best pedagogical practices to incorporate IK when teaching. Staff development can assist the ECD teachers with various IK related games, songs, riddles and stories. Various forms of staff development such as workshops and in-service training can be adopted. Teachers should also be supported to collaborate and together develop their own strategies for the inclusion of IK.

7.4 Incorporating IK in ECD

To facilitate implementation of the recommendations given above, an ECD model that incorporates IK into the ECD programme is proposed (see Figure 7.1). This model is grounded in socio-cultural theory and the ECD principles that state that development and learning occur in and are influenced by multiple social and cultural contexts (NAEYC, 2005). In addition, a leaner is viewed as a whole person who is part of a family, a community and a culture (North Carolina Division of Child Development, 2008). Play-based pedagogies such as traditional song and game are an integral part of the model. The anchor of the ECD programme in this model is the relationship between the 3Cs namely child, context (community), content and pedagogy. The relationship between stakeholders who constitute the ecology of ECD (community) is critical in implementing an ECD programme that incorporates IK. Below is a proposed IK- ECD model.

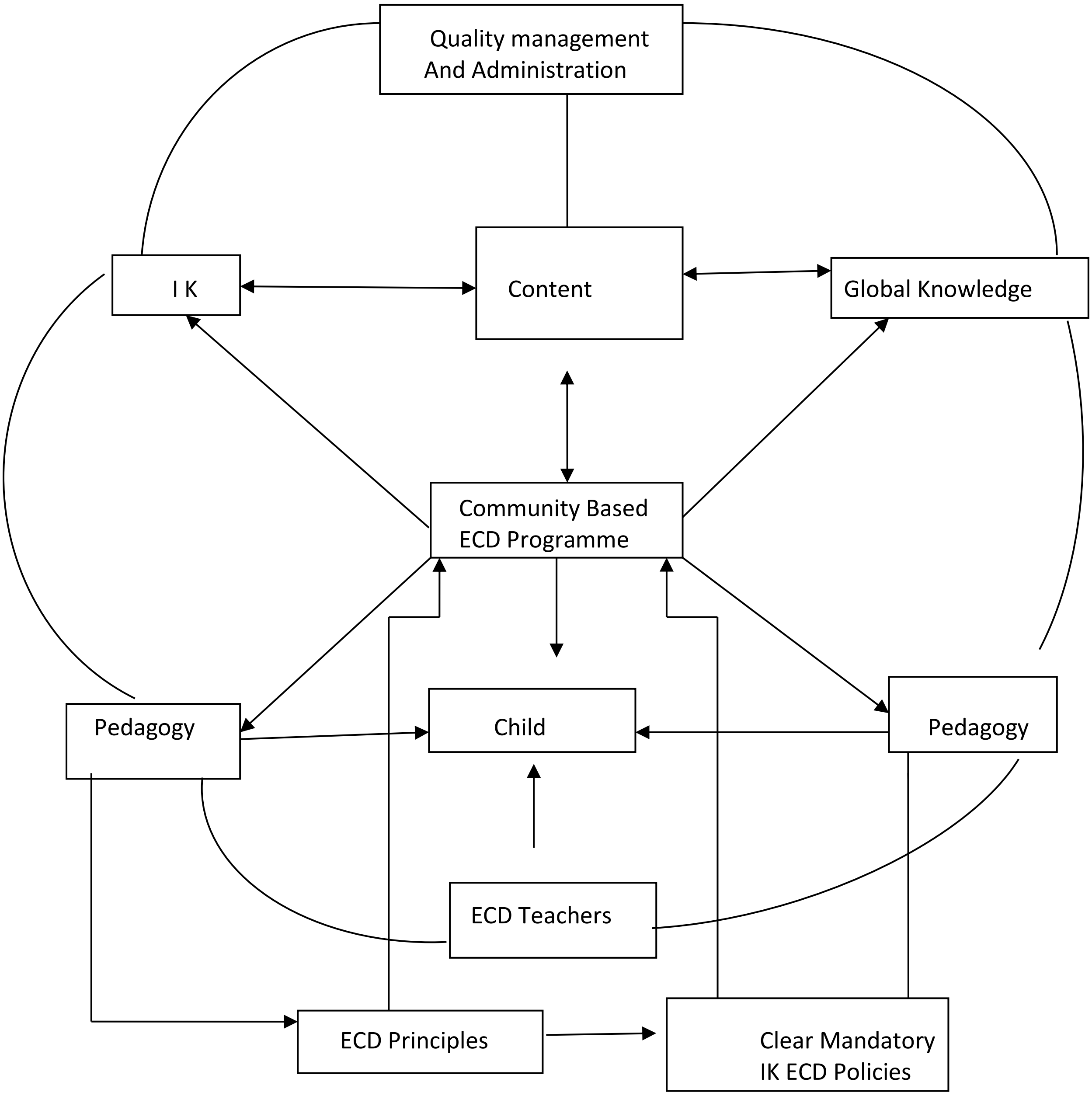

Figure 7.1. A proposed N. Manzunzu (2018) IK- ECD model

Figure 7.1 shows a community based ECD model known as the IK- ECD model. The model which is based on six main aspects which are community, content, pedagogy, child, ECD principles and policy is briefly explained.

7.4.1 Community

The community is the source knowledge for both the child and what is to be taught in ECD. The ECD child lives within the community and is immersed in the community dynamics. Thus, the content which is derived from that community is more comprehensible to the child. According to North Carolina Division of Child Development (2008) the child`s culture may seem obvious due to ethnic origins, but it is more than these obvious differences. The community guides the children`s way of life. Hence, it sets the content and methods of imparting knowledge and these are part of the people`s culture. For these standards to be achieved, there are teaching methods that are peculiar to certain communities such as songs, rhymes, dances and games. These are used to transmit IK from one generation to the other. A community also has its views about childhood. This includes behaviours, expectations and growth beliefs such as norms and values.

7.4.2 Content

The community can provide the much needed IK such songs, stories, games, norms and values. The songs, stories and games should be developmentally and culturally appropriate (Bredekamp and Copple, 2009). Knowledge comprises both IK (traditional stories, games, songs, stories and dances) as well as global knowledge. Global knowledge is also found in the community, for example, through schooling. In this model, the two forms of knowledge should not be viewed as competing or running parallel to each other but should complement each other or overlap where possible.

Figure 7.1 shows that IK and global knowledge occupy the same level; hence, no form of knowledge is better than the other. However, in teaching ECD children, it is prudent to begin with IK which will form the basis for introducing global knowledge and the IK thread should become extinct when global knowledge is introduced. Instead, the two should be juxtaposed. The ECD teachers should use both forms of knowledge to complement each other.

7.4.3 ECD Policies

The incorporation of IK into ECD teachers` pedagogical practices would be enhanced by having solid ECD policies with clearly outlined strategies for the inclusion of IK. Clear ECD policies mentioning the type of questions to ask have been explained in section 7.3.1.1.

The ECD policies should also make it mandatory for ECD teachers to incorporate IK into their pedagogical practices so as to avoid its extinction. As previously mentioned the policies must also be clear on the competencies and qualifications of ECD administrators so that favourable ECD policies that allow for the incorporation of IK into teachers` pedagogical practices can be designed. Promotions of ECD should be based on ECD qualifications and ECD merit to avoid non- specialists make critical decisions that might affect the effective incorporation of IK in the area.

7.4.4 Pedagogy

The ECD pedagogies would be enhanced by incorporating indigenous methods. The methods would include the use of more locally available traditional song, dance, games and stories. The use of songs, dances and locally produced toys in ECD should be promoted (Sagnia, 2004). For these to be effectively embraced, there is need to have much of children`s literature drawn from the indigenous people. However, the challenge is that not that many children's stories that can leverage the incorporation of IK have been written, especially in indigenous languages.
Teaching methods used by teachers strongly influence the quality of ECD programmes in that children`s mastery and holistic development is enhanced (UNICEF, 2000; Excell and Linington, 2011).

These methods need to become entrenched in ECD teachers' strategies. Both indigenous and western strategies need to be considered. Resource persons need to be embraced, in for example, the teaching of games and telling of such traditional stories. In these ways, the community becomes the nerve centre of ECD activities. The teaching and learning materials must be drawn much from the children`s culture to minimise the reliance much materials drawn from the world alien to the children.

7.4.5 ECD principles

The ECD principles would be based on both the global theories of child development (see chapter 2 section 2.7) and the indigenous view of childhood. The indigenous view will assist the ECD teachers to incorporate the desired competencies of both their communities and development. The principles would influence the choice of the content to be taught, learning materials and the pedagogy.

7.5 Recommendations for further study

Since the study, focused on Manicaland province alone, future researchers may extend the study to other provinces of Zimbabwe to establish ECD teachers' incorporation of IK in their pedagogical practices. This will also enable one to ascertain whether the findings of this study are applicable to the other provinces. Other researchers may also explore perceptions of other stakeholders like parents, and policy-makers with regard to IK. Further, other researchers may investigate the applicability of the proposed IK- ECD model in this study. The next section presents the final comments of the study.

7.6 Final Comments

The study established ECD teachers' perceptions on the incorporation of IK into their pedagogical practices. Views of School Heads and ECD teachers as well as observations of teachers' practice gave valuable insight into the ECD teachers` pedagogical practices in Manicaland Province schools.

The study found that the ECD teachers` understandings of IK varied significantly and this compromised the systematic incorporation of IK into their pedagogical practices. This compromise was further influenced by inconsistent policy documents which do not give clear guidelines regarding the inclusion of IK into the ECD programme. The more formal approach to ECD curriculum delivery further challenged teachers as playful pedagogies were also marginalised in the attempt to meet timetable constraints. In addition, learning materials leaned towards being pro-western with minimal opportunities to children to play with resources in the cultural huts.

It was also established that the ECD administrators such as School Heads and School Inspectors were not ECD specialists. Hence, they were not necessarily able to give the teachers adequate classroom support.

Teachers mentioned a variety of strategies to support the inclusion of IK in the ECD programme. However, they failed to see an active role for themselves in making this happen. Though this was not the aim of this study findings also revealed that teachers appear to be voiceless and lack agency. Thought should be given on how to better support teachers to become more proactive because they are crucial to the implementation of quality teaching and learning in the ECD phase.

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APPENDICES

RESEARCH INSTRUMENTS

APPENDIX 1

UNIVERSITY OF THE WITWATERSRAND

SURVEY FOR ECD TEACHERS

Preamble: You have been invited to take part in this study which intends to explore the utilisation of Indigenous knowledge in ECD.
Please answer all the questions in this survey truthfully. All information gathered through this survey will be treated confidentially. Information gathered will be used solely for the purpose of this study.

Indicate your responses with an [x] or writing in the spaces provided.

BACKGROUND INFORMATION

1. Age: Below 20 ☐ 20-29 ☐
   30-39 ☐ 40-49 ☐ 50+ ☐

2. Sex: Male ☐ Female ☐
3. Marital status
   Single ☐ Married ☐ Widow ☐
   Divorced ☐
4. Highest academic qualifications
   Grade 7 ☐ Zimbabwe Junior Certificate (ZJC) ☐
   "O" level ☐ "A" level ☐

5. Professional qualifications
   Paraprofessional certificate ☐ CE ☐ Dip ED (primary-ECD) ☐
   Bed (ECD) ☐ Med (ECD) ☐ Other ☐

SPECIFIC INFORMATION ABOUT THE UTILISATION OF INDIGENOUS KNOWLEDGE IN EARLY CHILDHOOD DEVELOPMENT.

Please circle your response

6. Have you heard of indigenous knowledge before? Yes No
   If yes where and how did you hear about it?

…………………………………………………………………………………………
…………………………………………………………………………………………
……………………………………………………………………………

7. Please explain what you understand about the term indigenous knowledge?
…………………………………………………………………………………………
…………………………………………………………………………………………
……………………………………………………………………………….
8. How often (if at all) do you use indigenous knowledge in your lessons?
Very often Often Rarely Not at all
9. Do you use traditional games during teaching and learning (play) in ECD?
Yes No If yes, explain your answer and give some examples.

……………………………………………………………………………………………
……………………………………………………………………………………………
………………………………………………………………

10. Do you use traditional Shona song and rhymes during teaching and learning in ECD?
Yes No If yes, give examples
…………………………………………………………………………………………
…………………………………………………………………………………………
……………………………………………………………………
11. Do you use Shona folk stories in your lessons? Yes No If yes, give examples
…………………………………………………………………………………………
…………………………………………………………………………………………
……………………………………………………………………
12. Do you find Indigenous knowledge useful in ECD? Yes No
Explain your answer
…………………………………………………………………………………………
…………………………………………………………………………………………
……………………………………………………………………
13. In your opinion, is indigenous knowledge adequately used in ECD? Yes
No Explain your answer

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………

14. Are you guided by policy in the use of indigenous knowledge? Yes No

15. If you answered yes to question 14, are you finding the policy useful in guiding you on the use of indigenous knowledge in ECD? Yes No Give reasons for your answer.

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………

Thank you for taking the time to answer this survey.

NB: I will collect the survey on or before the interview day.

APPENDIX 2

UNIVERSITY OF THE WITWATERSRAND

SURVEY FOR SCHOOL HEADS

Preamble: You have been invited to take part in this study which intends to explore the utilisation of Indigenous knowledge in ECD.
Please answer all the questions in this survey truthfully. All information gathered through this survey will be treated confidentially. Information gathered will be used solely for the purpose of this study.

Indicate your responses with an [x] or writing in the spaces provided

BACKGROUND INFORMATION

1. Age: Below 20 ☐ 20-29 ☐
   30-39 ☐ 40-49 ☐ 50+ ☐
2. Sex: Male ☐ Female ☐
3. Marital status
   Single ☐ Married ☐ Widowed ☐ Divorced ☐

4. Highest academic qualifications
   Grade 7 ☐ Zimbabwe Junior Certificate (ZJC) ☐ "O" level ☐

   "A" level ☐
5. Professional qualifications
   paraprofessional certificate ☐CE ☐ Dip ED (primary-ECD) ☐

   Bed (ECE/ ECD) ☐ Med (ECD)

SPECIFIC INFORMATION ABOUT THE UTILISATION OF INDIGENOUS KNOWLEDGE IN EARLY CHILDHOOD DEVELOPMENT.

Please circle your response

6. Have you heard of indigenous knowledge before? Yes No

   If yes where and how have you heard about it?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

   ………………………………………………………………………………

7. Please explain what you understand about the term indigenous knowledge?

……………………………………………………………………………………………

…………………………………………………………………………………………………
……………………………………………………………………………………..

8. How often do you see ECD teachers use indigenous knowledge in their lessons?

   Very often Often Rarely Not at all

9. Do ECD teachers use traditional games during teaching and learning (play) in ECD? Yes No If yes, explain your answer and give some examples.

   …………………………………………………………………………………………
   …………………………………………………………………………………………
   ……………………………………………………………………

10. Do ECD teachers use traditional Shona song and rhymes during teaching and learning in ECD?

   Yes No If yes, give examples

   …………………………………………………………………………………………
   …………………………………………………………………………………………
   ……………………………………………………………………

11. Do ECD teachers use Shona folk stories in their lessons? Yes No If yes, give examples

   …………………………………………………………………………………………
   …………………………………………………………………………………………
   ………………………………………………………………………….

12. Do you find Indigenous knowledge useful in ECD? Yes No Please explain your answer

   …………………………………………………………………………………………
   …………………………………………………………………………………………
   ………………………………………………………………………….

13. In your opinion, is indigenous knowledge adequately used in ECD? Yes No Please explain your answer

   …………………………………………………………………………………………
   …………………………………………………………………………………………
   ………………………………………………………………….

14. Are you finding the policy useful in guiding practice on the use of indigenous knowledge in ECD? Yes No Please give reasons for your

……

15. Do you have any suggestions on how indigenous knowledge can be better used in the classroom?

……

Thank you for taking the time to answer this survey.

NB: I will collect the survey on the interview date.

APPENDIX 3

INTERVIEW GUIDELINES FOR TEACHERS

1. Are you aware of Indigenous Knowledge (IK)?
2. How did you get to know about IK?
3. What is your understanding of IK?
4. Do you use IK in your lessons?
5. How often do you use IK in your lessons?
6. What forms of IK do you use in your lessons?
7. What is your feeling on the use of IK?
8. What challenges do you meet in the use of IK?
9. Do you have any suggestions on the use of IK?
10. Is there anything else you would like to mention in relation to IK?

APPENDIX 4

INTERVIEW GUIDE FOR SCHOOL HEADS

1. Are you aware of Indigenous Knowledge (IK)?
2. How did you get to know about IK?
3. What is your understanding of IK?
4. Have you observed ECD teachers use IK in their lessons during your supervisions?
5. How often do the ECD teachers use IK in their lessons?
6. What forms of IK do they use in your lessons?
7. What is your feeling on the use of IK?
8. What challenges do you meet in the use of IK?
9. Do you have any suggestions on the use of IK?
10. Is there anything else you would like to add in relation to IK?

APPENDIX 5
INFORMATION SHEET TEACHERS
Teacher's Consent Form

Utilisation of Indigenous Knowledge system in Early Childhood Development: A case study of selected schools in Manicaland Province of Zimbabwe.

Please fill in and return the reply slip below to Nomatter Manzunzu at house number 571 Hobhouse 4, Mutare before we begin the study indicating your willingness to be a participant in my voluntary research project called:

I, ________________________ give my consent for the following:

Permission to review/collect documents/artifacts	**Circle one**
I agree that (SPECIFY DOCUMENT) can be used for this study only.	YES/NO
Permission to observe you in class	
I agree to be observed in class.	YES/NO
Permission to be interviewed	
I would like to be interviewed for this study.	YES/NO
I know that I can stop the interview at any time and don't have to answer all the questions asked.	YES/NO
Permission to be photographed	
I agree to be photographed during the study.	YES/NO
I know that I can stop this permission at any time.	YES/NO
I know that the photos will be used for this project only.	YES/NO
Permission for survey	
I agree to fill in a question and answer sheet or write a test for this study. YES/NO	
Permission to be videotaped	
I agree to be videotaped in class.	YES/NO
I know that the videotapes will be used for this project only.	YES/NO

Informed Consent

I understand that:

- my name and information will be kept confidential and safe and that my name and the name of my school will not be revealed.
- I do not have to answer every question and can withdraw from the study at any time.
- I can ask not to be audiotaped, photographed and/or videotape
- all the data collected during this study will be destroyed within 3-5 years after completion of my project.

Sign______________________________ Date____________________________

APPENDIX 6

School Head`s Consent Form

Utilisation of Indigenous Knowledge system in Early Childhood Development: A case study of selected schools in Manicaland Province of Zimbabwe.

Please fill in and return the reply slip below Nomatter Manzunzu at house number 571 Hobhouse 4, Mutare before we begin the study indicating your willingness to be a participant in my voluntary research project called:

I, _________________________ give my consent for the

Circle one

Permission to be interviewed

I would like to be interviewed for this study. YES/NO

I know that I can stop the interview at any time and don't have to answer all the questions asked. YES/NO

Permission for survey

I agree to fill in a question and answer sheet or write a test for this study. YES/NO

Permission to be videotaped

I agree to be videotaped in class. YES/NO

I know that the videotapes will be used for this project only. YES/NO

Informed Consent

I understand that:

- my name and information will be kept confidential and safe and that my name and the name of my school will not be revealed.
- I do not have to answer every question and can withdraw from the study at any time.
- I can ask not to be audiotaped, photographed and/or videotape
- all the data collected during this study will be destroyed within 3-5 years after completion of my project.

Sign______________________________ Date______________________________

APPENDIX 7

Parent`s Consent Form

Utilisation of Indigenous Knowledge system in Early Childhood Development: A case study of selected schools in Manicaland Province of Zimbabwe.

Please fill in and return the reply slip below Nomatter Manzunzu at house number 571 Hobhouse 4, Mutare before we begin the study indicating your willingness to be a participant in my voluntary research project called:

I, ________________________ give my consent for the following:

Circle one

Permission to observe child in class

I agree to observe my child in class. YES/NO

Permission to be interviewed

I would like to be interviewed for this study. YES/NO

I know that I can stop the interview at any time and don't have to answer all the questions asked. YES/NO

Permission for survey

I agree to fill in a question and answer sheet or write a test for this study. YES/NO

Permission to be videotaped

I agree to be videotaped in class.

I agree my child be videotaped in class YES/NO

I know that the videotapes will be used for this project only. YES/NO

Informed Consent

I understand that:

- my name and information will be kept confidential and safe and that my name and the name of my school will not be revealed.
- I do not have to answer every question and can withdraw from the study at any time.
- I can ask not to be audiotaped, photographed and/or videotape
- all the data collected during this study will be destroyed within 3-5 years after completion of my project.

Sign______________________________ Date____________________________

APPENDIX 8
CONSENT FOR CHILD
Consent form for the children (to be translated into home language and read to them)

Date ____

Name of school. ____

I____ (name of child- which I will complete) agree to allow Nomatter to observe some of my lessons/activities.

Place a cross {X} next to your choice.

I agree to you observing some of our lessons/activities.

I agree to be part of the video recording.

If you do not agree to be part of the project place a cross next to the sad face.

If you do not want to be videotaped place a cross next to the sad face.

APPENDIX 9

ETHICAL CLEARANCE LETTER FROM UNIVERSITY OF THE WITWATERSRAND

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Wits School of Education

27 St Andrews Road, Parktown, Johannesburg, 2193 Private Bag 3, Wits 2050, South Africa. Tel: +27 11 717-3064 Fax: +27 11 717-3100 E-mail: enquiries@educ.wits.ac.za Website: www.wits.ac.za

25 August 2015

Student Number: 909095

Protocol Number: 2015ECE005D

Dear Nomatter Manzuzu

Application for Ethics Clearance: Doctor of Philosophy

Thank you very much for your ethics application. The Ethics Committee in Education of the Faculty of Humanities, acting on behalf of the Senate, has considered your application for ethics clearance for your proposal entitled:

Utilisation of indigenous knowledge systems in Early Childhood Development: A case study of selected schools in Manicaland Province of Zimbabwe.

The committee recently met and I am pleased to inform you that **clearance was granted**.

Please use the above protocol number in all correspondence to the relevant research parties (schools, parents, learners etc.) and include it in your research report or project on the title page.

The Protocol Number above should be submitted to the Graduate Studies in Education Committee upon submission of your final research report.

All the best with your research project.

Yours sincerely,

M Maseta

Wits School of Education

011 717-3416

cc Supervisor - Dr Lorayne Excell

APPENDIX 10

LETTER OF PERMISSION FROM THE ZIMBABWEAN MINISRTY OF EDUCATION

AH communications should be addressed to "The Secretary for Primary and Secondary Education"
Telephone: 734051/59 and 734071
Telegraphic address: "EDUCATION"
Fax: 734075

Reference; C/426/3 Manicaland
Ministry of Primary and
Secondary Education
P.O Box CY 121
Causeway
Harare

22 October 2015

Nomatter Manzunzu
House Number 571
Hobhouse 4 Extension
Raheen Destiny
Mutare

RE: PERMISSION TO CARRY OUT RESEARCH IN MANICALAND PROVINCE: MUTARE DISTRICT: PRIMARY SCHOOLS

Reference is made to your application to carry out a research in the above mentioned schools in Manicaland Province on the research title: ^

"UTILISATION OF INDEGINOUS KNOWLEDGE IN EARLY CHILDHOOD DEVELOPMENT (ECD) IN ZIMBABWE"

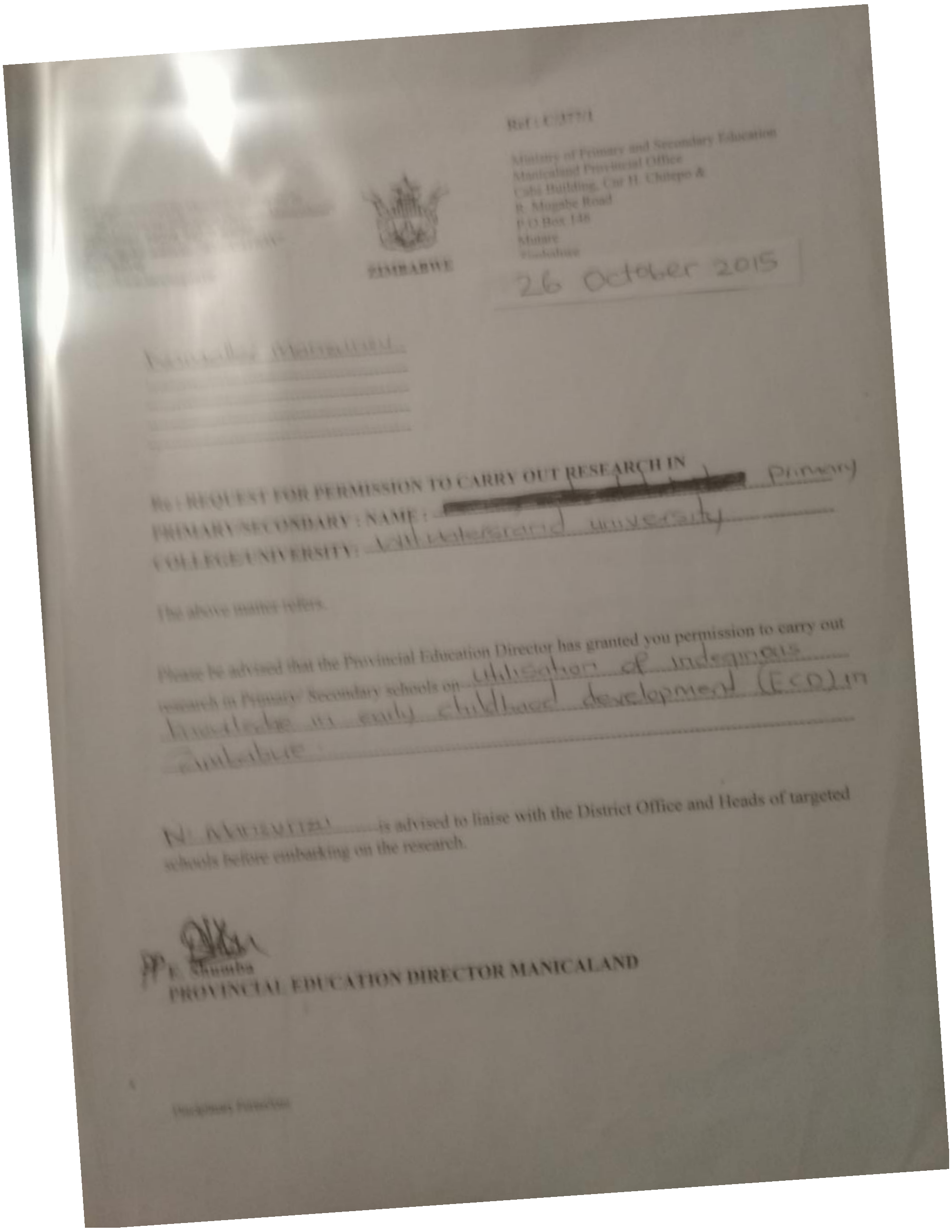
Permission is hereby granted. However, you are required to liaise with the Provincial Education Director Manicaland Province, who is responsible for the schools which you want to involve in your research.

You are required to provide a copy of your final report to the Secretary for Primary and Secondary Education by December 2017.

E.Chinyowa
Acting Director: Policy Planning, Research and Development
For: **SECRETARY FOR PRIMARY AND SECONDARY EDUCATION**
cc: P.E.D. Manicaland

APPENDIX 11

LETTER OF PERMISSION FROM THE MANICALAND PROVINCIAL DIRECTOR - EDUCATION



ZIMBABWE

Ref : C/277/1

Ministry of Primary and Secondary Education
Manicaland Provincial Office
Cabs Building, Cnr H. Chitepo &
R. Mugabe Road
P.O Box 146
Mutare
Zimbabwe

26 October 2015

[illegible]

Re : REQUEST FOR PERMISSION TO CARRY OUT RESEARCH IN [redacted] Primary
PRIMARY/SECONDARY : NAME :
COLLEGE/UNIVERSITY: Witwatersrand university

The above matter refers.

Please be advised that the Provincial Education Director has granted you permission to carry out research in Primary/ Secondary schools on utilisation of indigenous knowledge in early childhood development (ECD) in Zimbabwe

N. [illegible] is advised to liaise with the District Office and Heads of targeted schools before embarking on the research.

F. Chimba
PROVINCIAL EDUCATION DIRECTOR MANICALAND