Learning (Contexts) environments of young children in Zambia: Daily experiences, quality of care and developmental outcomes in day care centres in Lusaka.

By

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DECLARATION

I Inonge Liboma, hereby declare that the information in this dissertation is my own original work. Any other information presented is cited accordingly to show that it is borrowed from other authors.

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ABSTRACT

Investment in early childhood development has in the recent past increased due to the 250 million under-five children in low- and middle-income countries at risk of not reaching their developmental potential. Thus, investigating the quantity of care in more challenging, developing world context like Zambia is imperative. The aim of this study was to investigate the relationship between ECE daily experiences, quality of care and developmental outcomes of pre-schoolers enrolled in pre-school centres. The specific objectives include; to explore the ECE daily experiences of pre-schoolers in pre-school centres, to assess the ECE quality of care in the pre-schools and to compare whether pre-schooler's developmental outcomes differ on the basis of attending a high or low quality pre-school centres. The study also examined the difference that may exist in developmental outcomes of children enrolled in adequate, average, and inadequate care pre-schools. A total number of six preschools and 53 pre-schoolers participated in the study. Using the ZamCAT, structured questionnaire and observations, qualitative and quantitative data was collected. The results indicate that pre-schools that service children from the majority poor are offering inadequate quality care to the children. The results also indicated that there is a significant difference in the receptive language development of children from the inadequate, average, and adequate pre-schools with F (2, 50) = 6, 92, P=.002 according to the ANOVA test analysis. Another significant difference observed in the development of children among the three types of pre-school quality care was the difference in the letter naming exercise. ANOVA test analysis indicated a significant difference of F (2, 50) = 6, 92, P =.019. This study did not record any gender or age differences in the developmental outcomes of children after a t-test analysis was conducted. The daily experiences of children assessed include daily routines such as learning time, play time, eating time, and safety of children. To assess quality, teacher qualifications, salary, child-teacher ratio, and teaching aids where considered. The results indicate that adequate preschools pay their teachers a good

amount of money than average and inadequate preschools and have good child-teacher ratio. The qualifications of teachers in the three preschool categories are not quite different but the environment and teaching materials are way better in adequate care preschools than in average and inadequate care preschools. I therefore conclude from this study that pre-schools servicing children from middle and low social economic status families assessed offer low quality care and that depending on the inadequacy faced by the school, children may either delay in acquiring some or all the skills needed to develop fully. I recommend that preschool administrators and the government should put in place deliberate policies to promote quality care in preschools because access to ECE without quality care will still produce citizens who may fail to develop full potential and contribute fully to our nation.

Keywords*: Early Childhood Education, Quality care, Daily experiences, Developmental outcomes.*

DEDICATION

I dedicate this work to my mothers, fathers, sisters, brothers and my gradparents Mr H. S Mubita and Mrs M. Mubita. There prayers, encouragement and financial support has made me reach this far.

This is for the Liboma and Mubita families. I love you.

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Table of Contents

ACRONYMS

ANOVA	Analysis of Variance
ECCDE	Early Childhood Care Development and Education
ECE	Early Childhood Education
MDGs	Milennium Development Goals
MOGE	Ministry of General Education
SDGs	Sustainable development Goals
SPSS	Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION

OVERVIEW

The focus of this study was on the quality of care for children enrolled in pre-schools, their daily experiences and the developmental outcomes that may result from attending adequate and inadequate care pre-school centres. Firstly, the history of day care centres from around the world will be given and then the history of day care centres in Zambia. The chapter will also look at the aim, objectives, questions, and the significance of the study. The statement of the problem as well as the theoretical framework and definition of key terms will also be considered in this chapter.

1.1.HISTORY OF DAY CARE CENTRES

The history of preschools stem from nineteenth century in Philadelphia. The concept of day care was created by an elite group of women in order to service children of formal working women (Rose, 1999).This emergence was as a result of trying to help children who played on the city streets as their mothers went out to work and earn money to facilitate their livelihoods. The created child day care centres therefore serviced children of women who were driven into the labour force due to economical desperation (National Research Council and Institute of Medicine, 2002). In the twentieth century, more women were becoming highly educated, causing a reduction in childbearing as wages and jobs increased (Huntsman, 2008). Family structures also changed from 'father mother' parent families, where the 'father' goes for work and the 'mother' remains home to care for the child to 'single parenthood' due to the rise in divorce and out of wedlock births. The 'father mother' parent family with one parent at home became less and less common during this time (Brennan, 1998). Before the initiative to care for the children in day care centres, the children spent their

time playing on the streets without supervision or care. This necessitated for the creation of the child minding or day care system for lower income groups, in response to the necessity of maternal employment outside the home (Cahan, 1989). According to Cahan (1989) these centres were "crowded, marginally funded, staffed by untrained personnel, and barely able to meet minimal standards of sanitation". After 1900, the day nursery fell into increasing disrepute. Many critics of group childcare became both more numerous and more outspoken. Between 1910 and 1920, day care was criticized by professional social workers because of the observed poor quality of services offered (Cahan, 1989; Rose, 1999). Despite of the criticisms, day care for children was promoted by others as an educational experience beneficial to both children and their parents.

The criticism saw the emergency of new institutions with new definition of day care whose focus was entirely on children's education. The new institutions changed from charity work of servicing children of poor mothers to educating children. The change was necessitated to avoid stigma of charity and poor services that was related to the day care centres. The argument raised was that group care could be educational and beneficial for children. In addition, the educational benefits of nursery schools challenged the assumption that a mother's care was always best, and ultimately helped transform attitudes toward day care in general (Rose, 1999). With time, more childcare institutions became a deliberate agenda even when for the United States of America, childcare only became public agenda when the country needed women in the workforce to support domestic production (Lombard, 2003). At the end of World War II, the return of men to the workforce and their wives to their homes, caused childcare funding to disappear almost immediately. According to Stoltzfus (2003), after World War II childcare services that were subsidized with public tax disappeared due to the mothers return to homes from the workforce. Childcare services were of great importance and interest to the many wage-earning mothers and their families, hence

they fought to retain public childcare services. In doing so, social workers and the women forced public political debate and decision on this issue. However, their efforts to retain subsidies were not very successful. Childcare's requirement for large amounts of labour was what made it so expensive relative to parents' resources. With time childcare was performed by people who got low pay and most childcare workers were college graduates with poor education and minimal or no training. These carers were paid less or half the amount a well-qualified childcare employee would get paid (Brennan, 1998 & Lombard, 2003). Lombard (2003) also states that reforming the industry's hiring and pay practices would contribute to better quality care but would raise costs still further.

Good quality care is an issue that is paramount whether the care is by biological parents or others. For example, poor quality of childcare in day care centres was observed in more developed countries like USA (Zellman & Perlman, 2008; Brennan, 1998). The assumption is, if such poor quality of care is present in more developed countries, it is then imperative to investigate the quality of care in more challenging, developing world contexts like Zambia. The context of providing quality care to children is topical because the quality of care affects their development. Most experts whose profession is the study of childcare argue that care that fails to provide stimuli for development should not be considered good quality care. Critical to child development is an all-round development encompassing mental, physical, moral, social, and emotional.

In childcare context, quality and affordability are connected problems that affect child well-being and development. The high cost of childcare in centres leads some parents to taking their children to unregistered providers. These may save them some money but may provide care of poor quality or doubtful safety meaning even when families realize the benefits of good care, they often are not able to afford it (Bergmann & Helburn, 2002; Lombard, 2003). High cost of childcare made quality care became more expensive relative to

the income of many two-earner families. The high cost of childcare could not be afforded by most poor mothers as it took away almost 25% of their pay cheques (Bergmann & Helburn, 2002). Therefore, most children were not getting the quality of care that was needed. It was due to high cost of quality care that governments were being urged to subsidize childcare services. For example, in Australia, childcare had also moved from being a small matter of interest mainly to charitable groups comprised of upper-class women and a few progressive educationalists to a high profile, vigorously debated political and public policy issue. In the 1990s, childcare in Australia was widely regarded as central to the economic and social goals of the nation (Brennan, 1998). Brennan (1998) also stated that advocacy from most Australian women for government support to childcare for all families was because good quality care was of extreme cost. Their advocacy was that the government should support all regardless of their income just as other countries did so that the government help should not be restricted to the lower-income families only. Most of the parents from low-income bracket who did not get government help felt they had no alternative to the cheapest care they could find. More affluent parents had more freedom, but many did not spend the extra amount it takes to provide good quality. However, price is not the only problem, as parents claimed to want the kind of quality that experts specify, but many parents were not able to detect mediocre childcare or even bad care when they see it (Bergmann & Helburn, 2002). As a result, many poor to mediocre childcare facilities have been flourishing in America, and indeed are in the majority (Bergmann & Helburn, 2002).

Interest in quality care is because of the assumption that such care promotes all round developmental well-being of children. It was a argued according to Vandell and Wolfe (2000) that good quality care is associated to better developmental outcomes and that poor structural and process quality care has been associated to poor developmental outcomes. These two researchers also stated that good quality settings are likely to have better health and safety

practices which result in fewer respiratory and other infections among the children and experience fewer injuries on playground. High process care has been observed to support positive social, emotional, and cognitive development of young children (Lawrence, Ferguson & Kreader, 2005). In assessing day care quality, two aspects are considered: firstly, structural indicators including adult-to-child ratio, group size, and the formal education and training of the childcare providers. Secondly, processes including child's interactions with caregivers and other children, activities such as language stimulation, health and safety usually referred to process quality (National Institute of Child Health and Human Development, 2002; Vandell & Wolfe, 2000).

1.2 BACKGROUND OF EARLY CHILDHOOD CARE AND EDUCATION IN ZAMBIA

Education of young children is not a new phenomenon in Zambia, it dates to 1957 where a Statutory Act for Day Care and Nurseries (Chapter 313 of the Laws of Zambia) was instituted (Matafwali, 2007). The Act provides guidance in registration and regulation of day nurseries. In 2004, the government of Zambia transferred the ECE portfolio from the Ministry of Local Government and Housing to the Ministry of General Education to increase access. This was in line with the 2004 GRZ Gazette, the Ministry's concern has been the establishment of early childhood programmes for children living in rural areas and poor urban areas. The Ministry resolved to work with partner ministries, district and urban councils, local communities, NGOs, religious groups, families, and individuals to increase access at this level (the Education for All Global Monitoring Report, 2007). The momentum for ECE has since 2015 increased after the reinforcement by Ministry of Education. Prior to that, the MOGE's involvement in actual ECE provision had been minimal and limited only to providing an enabling environment for individuals and organisations to operate ECE centres (MOGE, 2016). The ministry has put up important measures ECE Curriculum, annexing over

500 ECE classrooms in existing primary schools and deploying of over 1,300 qualified ECE teachers to establish and accelerate the delivery of ECE services countrywide. The policy to increase access especially in rural areas seeks to facilitate broader reach of disadvantaged children using alternative Early Childhood Education delivery modes to promote their physical and emotional well-being, cognitive and language skills, and social development. The Zambian government has been committed to education for all and one of their goals was to increase the literacy rates to 80 percent by 2015 and work towards eliminating illiteracy by 2030 (MOGE, 2006). In (2009), Thomas and Thomas found that in Zambia there exists some constraints in ability to access formal ECE facilities which means the continued effort by the government to increase access to ECE programs has been premature and damaging to the already existing tenuous education system especially primary school system

The main role of government in the past has been focused on providing training to preschool teachers (MoE), providing legislation for nursery and preschools (Ministry of Local Government and Housing), and the Ministry of Health (MoH) has focused on maternal and child health and nutrition (Fifth National Development Plan). The MOGE has developed different ECE resources including the curriculum framework, the pre-school syllabus and the Early Learning and Development Standards (ELDS) ECE policy framework. According to the National Implementation Framework III (2012), the government planned to establish 7,000 pre-schools and train 3,500 pre-school teachers by 2015.

According to the UNICEF Annual Report (2014), "in order to promote school readiness for children three to six years old, the Government, with UNICEF support, adopted its' first ever Early Childhood Education policy and curriculum, and established a multi-sectoral National Early Childhood Development coordinating committee". This National Policy of the Ministry of Education focuses on children 3-6 years old and not on the age

group 0-2 years. The purpose of the policy is to enable the MOGE, to accelerate the delivery of ECE services through its principal functions of oversight, provisioning, and enabling. The policy provides an operational framework that is multi-sectoral addressing education, health, nutritional, and child protection needs of the children aged 3 to 6 in the delivery of ECE. The policy seeks to facilitate broader reach of disadvantaged children using alternative ECE delivery modes to promote their physical and emotional well-being, cognitive and language skills, and social development. Recognised as an important part to educating children, the idea of coordinated efforts for Early Childhood Education (ECE) provision continued to increase, targeting parents, communities and organizations running ECE programmes in the in Zambia. These coordinated efforts culminated an association called Lusaka Parents Pre-school Association and later renamed the Zambia Pre-school Association (ZPA). This association was founded to coordinate pre-school activities within the Lusaka region. Other organisations like the Church established training centres like Lutanda in Ndola and Rugambwa in Lusaka as Pre-school teacher training centres (MOGE, 2015). To advance the training of preschool teachers nationwide, in 1983, the government through the Ministry of education introduced the National In-service Teachers' College (NISTCOL). This training was later extended to Kitwe and David Livingstone in 1985 and 1986, respectively. As the need for trained ECE teachers kept increasing it led to the formation of another association called Early Childhood Teachers and Trainers Association of Zambia (ETTAZ) in 1998 (MOGE, 2015).

Even with this background, it is still evident enough that the Ministry have a lot to put in place for quality of care to be offered to children enrolled in preschools. There is need for an increased budget allocation for ECE to fully prepare children for grade one (Zambia Education Budget Brief UNICEF, 2019) and later success in life. Zambia Education Budget Brief (UNICEF, 2019) also states that the consistence in under resourcing of the ECE sector

is worrisome because children with poor quality care and no ECE are being enrolled in Grade 1 which will result in low school attendance and performance, are likely to repeat a grade, drop out of school, or be in constant need of remedial or special education. This will impact negatively on these children's' development and national economic growth.

1.3 AIM:

To investigate the relationship between ECE daily experiences, quality of care and developmental outcomes of pre-schoolers enrolled in preschools.

1.4 STUDY OBJECTIVES:

1. To explore the ECE daily experiences of pre-schoolers in day care centres
2. To assess the ECE quality of care in the day care centres
3. To compare whether pre-schooler's developmental outcomes differ based on attending a high- or low-quality care centres

1.5 QUESTIONS

1. What are the daily experiences of pre-schoolers enrolled in day care centres?
2. To what extent do pre-schoolers experience quality of care in day care centres?
3. What differences exist in developmental outcomes between pre-schoolers attending high- and low-quality care?

1.6 STATEMENT OF THE PROBLEM

According to Hamusunga (2012) the age range that defines the critical period of early childhood is zero to six years. A critical period for child survival, growth, and development. A period in an individual's life when the brain develops rapidly and that it is when walking, talking, self-esteem, vision of the world and moral foundation are developed. To develop well, the children need high quality care both in the home and out of home environment. In the past Zambian children from zero to six years old were cared for by parents, siblings, and

grandparents. Currently, the majority are enrolled in preschools and the quality of care can be different from the care received at home. Poor quality of care has been found to have some negative impacts on child development such as delay in cognitive and intellectual development, reasoning, poor language development and motor development. According to Matafwali and others (2012), most ECE centres in the country were found to be offering poor quality care. These ECE centres had unstimulating environments, poor hygiene and health practices, poor nutrition, less space and not safe. Since 2012 there seem to be no other study conducted assessing the quality of care in quality care and ECE environments in our country. Therefore, most pre-schools may still be offering poor quality care and this experience during pre-school time may negatively impact child development. Hence it is important to investigate the quality of care in preschool environments as it prepares the child for future success in school and life.

1.6 SIGNIFICANCE OF STUDY

In 2014 a deliberate ECE policy to make sure 10 percent of 2.4 million children aged 3 to 6 years have ECE experience by 2020 (Mwanza Kabaghe, 2015) was put in place. Access and quality are two separate but important aspects of education that need attention. Access fosters education for all, receiving quality of education is even more critical in the development of children. An educational system can boast that it has achieved what Myers (2006) referred to as, "education for all" because 100% of the children in the designated age range are enrolled, but some or all of the children may be enrolled in centres providing education of low quality. As access increase, it is also important to improve on quality because it is essential for optimal development and ensuring that children are receiving correct nurturance experiences. The children should not just have access to pre-school, they

should also benefit from the quality educational services that prepare them for formal schooling which in Zambia is grade one, cognitive, and motor development to help them positively adapt to their environment. However, if the quality of an Early Childhood Education service or centre is very low such that it has poor health, safety, feeding policies and staff that offer less care and attention to the children than that which is available at home. Such low-quality care can have a negative impact on the lives of the children. In such cases, it can therefore, be argued that enrolled children would be much better off at home (Myers, 2006). According to the Lancet series (2007), a conservative estimation of more than 200 million children under 5 years failing to reach their full potential in cognitive development because of poverty, poor health, and nutrition, and deficient care was made. Hence it is especially important that such a study be carried out in the Zambian context to understand the quality of care, daily experiences of children in preschools and how this may be related to their developmental wellbeing and outcomes. This study will also contribute to the ECE knowledge and developmental outcomes of children in Zambia.

1.8 THEORETICAL FRAMEWORK:

The Ecological Systems theory of Uri Brenfernbrenner (1986) has been used in the current study to understand the relationship that exists between child development and the context in which the child is developing. The theory has been used to explain how the care within the learning context of the child is related to the child's development if the context is offering quality care for optimal development/academic skills. Mesosystems consist of two or more microsystems and the linkages or processes that combine or connect them. A mesosystem is a system which consist of two or more microsystems and the linkages or processes that combine or connect them. The family, school, community, religious groups, peers, and other processes that exist in the child's development context all play a part in contributing to child development. Mashall (2004), stated that these microsystems, such as families or child-care

settings, are characterized by proximal connections among individuals and that they exist within a back and forth connections. The mesosystem exists within the larger context of the exosystem, the settings which indirectly influence the child's life through their parents/caregivers world such as workplace, educational institutions that train child-care teachers and providers, and government agencies that set regulations for child-care facilities or establish welfare-reform policies. All the above systems operate within a large system called macrosystem which is the society. In this system, family, community, and national processes as well as policies exist that may impact the child direct or indirectly are imperative for understanding ECE experiences, quality of care and developmental outcomes. Thus, the focus on pre-school quality care and child developmental outcomes.

1.9 DEFINITION OF KEY TERMS:

1. Preschools refer to out of home care, supervision and guidance of a child or children under seven (7) years of age including a child with special needs, unaccompanied by a parent, guardian, or custodian on a regular basis, for periods of less than 12 hours per day.
2. Quality of care is defined using the structural and process quality in the child's context. Structural quality is used to measure classroom group size, regulations, education level of care giver and professional commitment to carer. While process quality is a term that is used to directly measure child's experiences (Kraeder, Ferguson & Lawrence, 2005).
3. Daily experiences in this study refer to experiences of children in their pre-school and home environments. Experiences such as play, nutrition, health, safety, and interactions.
4. Developmental outcomes refer to the positive and negative attributes that are associated to childhood experiences.

CHAPTER TWO

LITERATURE REVIEW

OVERVIEW

This chapter focusses on findings of other researchers on the ECE quality of care, daily experiences, and child developmental outcomes. Literature will include Zambian and other studies done globally on quality care and child development.

2.1 DAILY EXPERIENCES AND DEVELOPMENTAL OUTCOMES

According to Shonkoff and Philips (2000), early experiences clearly affect the development of the brain. The experiences in the first years of life have a long-lasting impact on the child's development through adulthood because it is the time when the brain develops rapidly, and the experiences influence its development. The brain develops rapidly through neurogenesis, axonal and dendritic growth, synaptogenesis, cell death, synaptic pruning, myelination, and gliogenesis (Grantham-McGregor, Cheung, Cueto, Glewwe, Richter & Strupp, 2007). Early experiences that are essential to ensure normal brain and behavioural development and school readiness include; encouragement for exploration, mentoring in basic skill, celebrating developmental advances, rehearsing and extending new skills, protecting from inappropriate disapproval, teasing, and punishment, communicating richly and responsively as well as guiding and limiting behaviour (Ramey & Ramey, 1999). The good early experiences help the brain to develop well, while experiences of neglect and abuse can literally cause some genetically normal children to become mentally retarded or to develop serious emotional difficulties (Arlington, 1992). UNICEF (2006) also supports the argument that positive early care experiences organise a child's brain which give them ability, skills, and confidence to engage in satisfying, positive relationships, and experiences. UNICEF (2006) also argued in line with Arlington (1992) that stress and challenging early experiences have detrimental

effects to any child's developing brain structure and function, with potentially negative consequences for their developing social and emotional skills but, with the subsequent quality care there is helping to buffer any early setbacks. Shonkoff and Philips (2000), argued that young children are capable of deep and lasting sadness, grief, and disorganization in response to trauma, loss, and early personal rejection. Therefore, deep lasting sadness, grief and rejection may cause a normally developing child to end up developing negatively as it may cause loss of concentration in child's activities that direct one's growth toward positive developmental outcomes.

According to Grantham-McGregor and others (2007), "brain development is modified by the quality of the environment. Animal research shows that early under-nutrition, iron-deficiency, environmental toxins, stress, and poor stimulation and social interaction can affect brain structure and function and have lasting cognitive and emotional effects". Shonkoff and Philips (2000) also argued that parents and other regular caregivers in children's lives are "active ingredients" of environmental influence during the early childhood period. Meaning that because the parents and other care givers are part of the child's developmental context or environment, they play an active part in influencing the experiences of the childhood period.

According to Arlington (1992), children who receive sensitive, responsive care from their parents and other caregivers in the first years of life enjoy an important head start toward success in their lives. He argued that the secure relationships they develop with the important adults in their lives lay the foundation for emotional development and help protect them from the many stresses they may face in their day to day experiences as they grow. Arlington (1992) also states that researchers who have examined the life histories of children who have succeeded despite many challenges in their lives consistently found that these people have had at least one stable, supportive relationship with an adult. Without at least one such relationship, development is disrupted, and the consequences can be severe and long

lasting but if provided or restored, a sensitive caregiving relationship can foster remarkable recovery (Shonkoff & Philips, 2000).

The daily experiences of children whether in the home or day care environment is influenced by culture, this is reflected in the rearing and caring practices by both the home caregivers and day care carers. According to Shonkoff and Philips (2000) cultural practices are designed to enhance positive child development however, some can seriously compromise early child development. The two researchers also argued that it is through cultural regulations and practices that the child's emotional control and social adaptation is enhanced, and that self-regulation is the cornerstone of early childhood development that cuts through all domains of behaviour. In a preschool environment, culture can be explained as the daily routines, activities and ways of child-teacher interactions which include different lesson, eating and play times. In a study by Wishard, Shivers, Howes, and Ritchie (2013) with two hundred and sixty children (50% girls) and 80 teachers from 22 programs in Los Angels and Rural North Carolina, positive associations were found between teacher program practices and classroom quality. These practices included teacher positive relations with children and good care with a community focus. This study had a large sample unlike the current study with only 53 child participants from 6 preschools. However, it is important to note that different preschool practices can result in different effects on child developmental outcomes. These effects can either be short term or long term positive or negative effects, a topic which the current study did not consider looking into. Wishard, Shivers, Howes, and Ritchie (2013) found that both culture and teacher practices were significant contributors to their model predicting child experiences in childcare. In addition, children's competent peer behaviours as well as their participation in learning activities could be significantly predicted by at least one of the following constructs: teacher and child culture, pronounced practices, and classroom quality (Wishard, Shivers, Howes& Ritchie, 2013). Therefore, different home

cultures and preschool cultures which contribute to child early experience therefore contribute differently to child developmental outcomes.

According to McQuillan (2007), it is of great importance that the teachers or carers in preschools engage the parents in their programs. However, that this engagement should not be involvement rather, as partnership to reflect the shared relationship that exists between parents' care givers in the day care centres. In order for the child to learn effectively and enjoy the learning experience, both the home environment (Kaneneka, 2013) and the preschools have to be of high quality because human relationships, and the effects of relationships on relationships, are the building blocks of healthy development (Shonkoff & Philips, 2000). McQuillan (2007) also states that every child is capable of learning if the methods and environments respect their individual development and personal interest. He argued that the process of learning is dynamic and that its outcomes are integrated into the children's lives. However, the child's learning desire can either be increased or decreased by the caregivers' sensitivity and children who enjoy school are more likely to attain the skills and knowledge appropriate for their ages and developmental. Thus, less stimulating environments, unresponsiveness and insensitivity from the carers can reduce the desire to learn

QUALITY CARE AND DEVELOPMENTAL OUTCOMES

Just as the quality of care in a home is of great importance to child development, the out of home care is of great significance to child development as well as the relationships that exist in the out of home environments. It is important therefore that the out of home carers should be esteemed and compensated adequately for their services. This as a result will enhance stability and quality in their interactions with the children and care (Shonkoff & Philips, 2000). As observed by (Brenan 1998, Lombard 2003 & Kaneneka 2013) carers of children in

the preschools still have less education and are not well paid yet have a huge responsibility placed in their hands. In Zambia for example; Haßler, Hennessy, Cross, Chileshe and Machiko (2014), found that on average there was one classroom teacher for every 62.6 students in Zambian primary schools, but class sizes varied enormously and rural schools had fewer teachers per head. Even when this example is referring to primary schools not preschools, an assumption of having the same situation can be given for preschools.

In a study by Kaneneka (2013) conducted in Chibombo District in Central Province of Zambia, targeting ten 10 ECCDE centres out of 74 and ten 10 basic schools which received children from the centres. The results on the facilities of the schools showed that 9 of the respondents said the facilities were poor and fair. Only one respondent said the facilities were good. The study also reviewed that the caregivers were not trained and poorly paid and at times, nothing was given to them which was not motivating them. Kaneneka (2013) also reported that the partners (Plan International) cited the challenge of sustainability of the centres once handed over completely to the community. This was due to lack of support from the Ministry of Education (MOE) in terms of monitoring, supervision, and financial support. The study gives us insight on how non-governmental funded schools may end dilapidated and without good sustainability plans once handed over to communities or the Government of Zambia.

Shikwesa (2014), a study conducted in Kabompo district of North Western province with a sample of 70 participants drawn from three schools, comprising 37 primary class teachers, 3 head teachers, 3 ECE teachers, 2 District Education authorities and 23 parents and other stakeholders. It was found that 21 (52.5%) of the respondents indicated that they were Diploma holders while 18 (45%) were Certificate holders. Only 1 (2.5%) was a degree holder and there were no respondents with postgraduate qualifications. It is worth mentioning that qualification of the teaching staff is key to fostering promotion and better attainment of

quality at every level of education, including the high-quality provision of Early Childhood Education. It was also found that there was lack of appropriate infrastructure for children. The classrooms used in government preschools were not modified to suit ECE children. This reflected the fact that government did not prepare adequately before annexing the primary schools. The free entry school policy also meant that children were being enrolled in high numbers causing overcrowding because the government did not give the direction on how many children a classroom should accommodate. One of the respondents in Shikwesa (2014) study attested to the fact that attending to every child is not possible in a classroom of about 40 children. Others end up just playing and not concentrating on learning. Overcrowding also results in shortages of furniture, teaching and learning materials such as crayons, colour pencils, and play objects like puppets and other toys which are in short supply at school."

In line with Shikwesa (2014) and Kaneneka (2013), most ECE centres in Zambia lack appropriate classroom space and good infrastructure, perhaps this remains the main challenge facing the ECE subsector. The centre may have a clean environment but with poor infrastructure (Report on Status of Education in Zambia, 2015). In 2015 alone, government converted a total of 695 classrooms at primary school level to ECE classrooms and 125 new ECE classrooms were constructed with the help of development partners during the same year. However, most primary schools annexed into ECE centres also lack the necessary play materials that are important in the delivery of quality ECE services. Some ECE challenges in the country include the lack of a clear policy framework, low public investment in ECE infrastructure, low funding, low standards monitoring and inadequate qualified teachers (Report on Status of Education in Zambia, 2015).

In Zambian literature studies on child development have been conducted on topics such as attachment and child secure base, early learning and home environment, special education needs and inclusive education (Mooya 2009; Chansa-Kabali 2014 & Mulunda

2017).Research on assessment of benefits of early childhood care and development of child assessment tests have also been done (Matafwali, Shallwani & Sibanda; kaneneka 2013).However no research in the Zambian context has been conducted that directly relates quality child care to child developmental outcomes. Hence using more Zambian literature on primary school contexts to support the significance of the current study. Like in other sub-Saharan African (SSA) countries, Zambia has many under-qualified teachers working in classrooms that lack basic resources. The situation reported was particular to teachers in primary and secondary schools which have been for a long time around in Zambia. Therefore, it may even be a worsened case for pre-school teachers who may have a much bigger number of children to care for in one classroom by one teacher but with less pay. According to (Phillips et al., 2000), teacher salary is a strong predictor of quality care, particularly because it is associated with other quality centre characteristics including less staff turnover and more educated staff. Teacher wages in combination with teacher training, parent fees, ratios and group size can significantly predict the quality of classroom interactions

Shikwesa (2014) argued that the Zambian free entry school policy meant that children were being enrolled in high numbers causing overcrowding because the government did not give the direction on how many children a classroom should accommodate. One of the respondents in Shikwesa (2014) study attested to the fact that attending to every child is not possible in a classroom of about 40 children. Others end up just playing and not concentrating on learning. Overcrowding also results in shortages of furniture, teaching and learning materials such as crayons, colour pencils, and play objects like puppets and other toys which are in short supply at school."

Numerous studies have also documented the importance of good nutrition, conducive environments, and high quality care as necessities for the developing central nervous system as well as foundations for reaching full developmental potential (Kaneneka, 2013; Grantham-

McGregor and others 2007; Shonkoff and Philips, 2000; & Arlington, 1992) The current study like many other studies (Burchinal, 2000) was not a longitudinal study and therefore can only state the findings of other researchers on lasting impacts of ECE. According to Grantham-McGregor and others (2007), many children younger than 5 years in developing countries are exposed to multiple risks, including poverty, malnutrition, poor health, and unstimulating home environments, which detrimentally affect their cognitive, motor, and social-emotional development. Such limitation in early development contributes to late school entry, poor school performance, and ultimately, limitations for success later in life (UNICEF 2006, UNICEF 2019, Shonkoff & Philips, 2000). Therefore, due to most Zambians being poor there is a great increase in the probability that a child will be exposed to environments and experiences that are unstimulating and in turn cause detrimental effects to their development (UNICEF, 2019). Thus, it is evident that poverty during the early childhood period can be more damaging than poverty experienced at later ages because of the detrimental effects it has on the child's cognitive, motor, and social-emotional development. Hence the need to assess daily experiences, quality of care and developmental outcomes in preschool centres in Zambia.

Childhood play is one of the important experiences in which learning takes place. Poverty can directly or indirectly impact negatively on child play. The interactions of child and environment due to poverty can impede child growth through play. Most adults in poverty-stricken environments do not Seize opportunities to engage children in play that contribute to all aspects of development such as songs, local games that strengthen muscles and refine motors skills. They only wait for opportunities when they can have access to play equipment such as jumping castles, swings, and other play toys in play parks. However not all preschools or parents will have access to such and hence days go by without child play that contribute to cognitive, motor, and intellectual growth. Goldstein (2003, p.2) states that,

"nearly everything the growing child needs to learn is developed and practiced in play. Skills included in play are counting, motor co-ordination, speech and abstract skills, imagination, problem-solving, planning, and 'learning how to learn". In his review of studies on play Goldstein (2003) found that play is an important aspect of daily child experiences that direct child growth toward positive developmental outcomes. It was found that different types of play enhance cognitive development by at least 33%. Other studies also found Play to be significantly related to creative problem-solving, co-operative behaviour, logical thinking, IQ scores, and peer group popularity. It was also estimated by Fishers (1992) that play enhances the progress of early development from 33% to 67%. This is achieved by increasing adjustment, improving language, and reducing social and emotional problems. Because play enhances cognitive development, it is evidenced that pretend play can enhance school readiness, social skills, and creative accomplishment. It is also evident that disruption in play is associated with difficulties at school, while competent playing is positively related to early school performance and school achievement. Disruptive or disconnected play behaviours were significantly related to patterns of disruptive and deregulated experiences in the classroom with peers and with the learning process (Fantuzzo, 2002).

Research has shown that through play children learn to cooperate, follow rules, develop self-control, and learn pro-social behaviours. A playful child can therefore be described as a happy child, popular, physically active, adventurous, emotionally intelligent, and better communicator than those who play less (Goldstein, 2003). Playful children also play longer when there is wide variety of toys (Singer, 1994 as cited in Goldstein, 2003). In a Zambian environment which is rich in cultural songs, dances, local child games and stories playful children can still play longer whether in guided or free play times even without a variety of toys. Another important study on play was conducted by Taneja, Sriram & others (2002) on the "impact of a structured 90 -minute play session on development of children in

an orphanage", found that play accelerates psychosocial development in young children. Their intervention programme of structured play resulted in acceleration of psychosocial development in otherwise healthy institutionalized children. They assessed 30 children aged from 6 months to 2.5 years in an orphanage in India for their Motor, Mental and Social Quotients and the Vineland's Social Maturity Scale. A structured system of play was then built into the routine of the orphanage. The impact of the intervention was assessed at the end of 3 months. The children's mean Motor Quotient rose from 63.7 to 81.7, mean Mental Quotient rose from 65.8 to 89.6 and the mean Social Quotient rose from 61.9 to 91.3. There was also an overall change in the environment of the orphanage. Children became more active, playful, responsive, and independent. Contrary to what caretakers assumed, their workload decreased. In this study, it was noted that some of the improvements may have resulted from simple maturation because the intervention report was only after 3 months which could have meant that maturation could have contributed less. However, due to not having the control group, the researchers could not report the relative contributions that both play, and maturations had on the children's development.

High Quality care is related to positive child development such as language development. Hence environments with good quality care can stimulate cognitive and language skills development. However, according to Mashburn, Pianta, Hamre, Downer, Barbarin, Bryant, Burchinal, Early and Howes (2008) the only link to child outcomes after their observations on overall quality of care as measured by the ECERS-R was was the positive association with children's development of expressive language skills. In their study the measure of "pre-K quality that most consistently and strongly associated with children's development was dimensions of teacher–child interactions that children directly experienced in classrooms". Teacher-child interactions can hence be an important key aspect in development of children in pre-schools. That can be a reason why Early childhood

professionals have long recognized the importance of language and literacy in preparing children to succeed in school. Early literacy is seen as having a major role to play in enabling the kind of early learning experiences linked with academic achievement, reduced grade retention, higher graduation rates and enhanced productivity in adult life (Strickland & Riley-Ayers, 2006). Through quality interactions children learn both receptive and expressive language. Research has identified language as a key predictor for reading and school success (Strickland & Riley-Ayers, 2006. Listening, speaking, reading, and writing also occur naturally together in learning events in school at all grade levels, even though traditionally they were taught separately (Strickland & Riley-Ayers, 2006). Research has found that language and literacy acquisition happens best in the context of caring, attentive relationships which in turn can influence three areas of behaviour that are critical components of language development: expressive language, receptive language and social engagement (Dealy, Pacchiano & Shimpi, 2007).

High quality care is also related to cognitive, social, emotional, and motor development in children. Those who attend good quality care develop better than those who attend poor care. The early development of motor skills, language, self-confidence, play, and problem-solving abilities, for example, are relevant for understanding competence in the school years (Masten & Coatsworth, 1998). According to a study conducted in the United States of America by (Magnusson, Ruhm and Waldfogel, 2004 as cited in Kamerman 2004) focus on school readiness using data from the Early Childhood Longitudinal Study–Kindergarten Class of 1998-99 (ECLS-K), a large nationally representative sample of children who entered kindergarten in the fall of 1998, showed that children who attended prekindergarten programs entered primary school more ready to learn and had better math and reading performance at school entry. And that there were more lasting cognitive gains for disadvantaged children. Studies found that high quality early childhood education can have

large and significant effects on school readiness, produce both short- and long-term cognitive and academic benefits for children from disadvantaged backgrounds, and that the positive effects are disproportionately larger for disadvantaged children. Whether short term or long term, the current study only focussed on the differences that may exist between children attending adequate quality care and inadequate quality care preschools.

Shonkoff and Philips (2000) state that high quality early childcare setting is one that supports optimal learning and development and that children who attend such care settings have greater language, cognitive and social competences than children who receive lower quality childcare. Other researchers have reported that high quality care increases children's language development, self-confidence and emotional security, and ability to regulate their own behaviour (Howes and Hamilton, 1993). Research has also found that smaller teacher-child ratios and appropriate group sizes have repeatedly been associated with quality childcare (Korjenevitch & Dunifon, 2010). Korjenevitch and Dunifon (2010) also found that children in classrooms with lower child-adult ratios have been found to understand teachers better, initiate and participate in conversations more frequently, have better general knowledge, readily cooperate, and show less hostility in interactions with each other. This can be said of the children in the assessed preschools which had small group size. The children were free to communicate with each other. These children also participated fully in class by asking and answering questions. It was evident in the current study that teachers and children in small group sizes had more warm and genuine interactions as it is easy for the teacher to pay attention and respond to each child appropriately.

Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, and Yazejian (2001), in their research on the Cost, Quality, and Child Outcomes (CQO) in Child Care Centers Study, a study of center-based community child care and children's longitudinal outcomes in four states in the United States. The data included measurement of preschool child-care

quality and longitudinal assessments of children's language, cognitive, and socio-emotional functioning over a 5-year period from preschool through second grade The associations between children's developmental outcomes and the quality of child care and school experiences over time were examined teacher–child closeness tended to relate to children's social and behavioural skills over time. The composite index of child-care classroom practices during the first year of the study showed modest correlations with children's language and math skills over time. Child-care classroom practices were also related to reading skills at the first assessment, to cognitive and attention skills during the preschool years, and to sociability at the first assessment Similarly, classroom practices in kindergarten were modestly related to children's kindergarten language and math skills, and teacher–child closeness in both kindergarten and second grade was moderately to modestly related to children's social skills in elementary school. In contrast, measures of second grade classroom practices were not related to children's cognitive or social skills in second grade. In comparison, maternal education was moderately related to children's language and cognitive skills over time, and modestly related to cognitive and attention skills and problem behaviours over time. In this study, maternal education was not assessed, the study was not even longitudinal and teacher-child closeness was not study focus. However, the study tried to understand how well the teacher can manage a class of children looking at the group size.

A project supported by the International Business Machine (IBM) Company to improve the quality of child care for its employees called the Family-Friendly Child Care Study (2004), conducted to identify the specific characteristics of family-friendly child care and to encourage parents and child care centres to work together in order to make their centres' programs and services more family-friendly. Two of the study goals in the Family-Friendly Child Care Study were to identify the key elements of family friendly childcare and to understand the business impact of family friendliness on childcare centres and parents'

employers. In this study six elements of family friendly childcare were identified. The researchers conducting the Family-Friendly Child Care Study made an important discovery that overall high-quality care which is defined by factors including teacher: child ratio, quality of the educational program, and level of training and experience of the staff serves as the foundation for family friendly care. In other words, all childcare centres must have a basic level of quality for the family-friendly elements to develop. Family-friendly elements are what enhances or improves a centre to be of high-quality care. Another important finding was that higher ratings of quality and family-friendliness are associated with higher job satisfaction among the staff at childcare centres. Typically, greater job satisfaction among teachers and administrators translates into reduced staff turnover. High-quality, family-friendly centres not only serve families better, but they also tend to have more satisfied employees (IBM family-friendly study, 2004).

CHAPTER THREE
METHODOLGY

OVERVIEW

This section outlines the design, sample and sampling techniques used as well as the instrument, procedure, and ethical considerations.

3.1 DESIGN:

The study is a descriptive and exploratory design utilising a mixed method technique. Quantitative methods which include a standardised questionnaire and the ZamCat scales of child development were used to assess quality of care, daily experiences, and developmental outcomes. Qualitative questions and observations were also used as a follow up on some quantitative questions for more understanding on the topic.

3.2 SAMPLE AND SAMPLING TECHNIQUE

The sample consisted of nine pre-schools within Lusaka but with fifty-three pre-schoolers aged four to five years drawn from six of the nine pre-schools for developmental outcome assessments. The pre-schoolers were enrolled in these pre-schools for at least one year and where all in reception class at the time of assessment. Initially, the sampling technique to be used was randomisation but after trial, the technique failed purposeful sampling technique was settled for. It was not possible to use random sampling because the randomly sampled pre-schools did not consent to take part in the study due to unknown reasons. Therefore, only those who consented were used as participants for the study. Purposefull stratified random sampling was used to sample children in one reception class, and these were all legible to participate in study with parents' consent. The class teachers automatically became part of the sample during child developmental outcome assessments and observations.

3.3 PROCEDURE:

Firstly, the researcher got an introduction letter from the early childhood directorate, a department under the Ministry of Education allowing her to conduct the study. Permission was also sought from the administration of various pre-school centres where self-reporting questionnaires were administered after the school administration consented.

Then the researcher went round in day care centres to seek consent from the principles, head teachers and the directors. With consent, observations where conducted on some processes that take place in pre-schools and administering a self-report questionnaire to the person in charge of each pre-school. However, administering the questionnaire was only done after consenting to take part in the study.

The pre-school centres were put into three categories: low inadequate, moderate and adequate preschools. Factors considered included child-teacher ratio, group size, physical facilities, child nutrition, safety, staff qualifications and daily child routines within the care centre environment. This was done in line with the minimum standards of care document for Zambian children.

To assess the children, the time frame depended on the individual schools. They gave the researcher a specific time when the assessments could be done. The researcher also had challenges with funds for transportation hence it took about 3 months to finish all child assessments. Nine pre-school centres responded to the quality of care questionnaire. However, only six e preschool centres had parents who were willing to have their children participate in the developmental outcome assessment task using the ZamCat test. The teachers and carers were present during the assessment process as the researcher engaged with the children. The presence of carers reduced the anxiety that resulted from the presence of the strange researcher, this also encouraged children to participate in the activities without

fear knowing that their carer was present. This also made parents to have confidence in the researcher as some parents would wait for their child without disturbing the assessment process.

The researcher got ethical clearance letter from the University of Zambia Ethics committee and consent forms were signed by the head teachers who got verbal permission from the parents for the children to be part of the study. The children were as well asked if they wanted to go ahead with participation after being told how assessment with the ZamCat scales is done.

3.4 INSTRUMENTS:

Quality of care and daily experiences of children were assessed using a self-reported questionnaire and observations. This enabled the researcher to collect data on; child-teacher ratio, group size, physical facilities, child nutrition, safety, staff qualifications and daily child routines within the care centre environment. Levels of quality care were categorised based on the preschool scores from the total number of items on each variable on observations list. This was in addition to the self-report questionnaire that reported on salary range, teacher qualifications and child-teacher ratio.The self-report questionnaire focussed on the time children spend at their various care centres; playing, learning and eating patterns as well as the security and interactions between carers and children in the day care setting.

To assess child developmental outcomes, the Zambian Cognitive Assessment Test (ZamCat) was used. The ZamCat is a locally developed tool for assessing child development, it provides an example of a broad assessment that was constructed by adapting a range of existing instruments each of which is designed to measure specific domains and using variety of methods, but primarily from a one to one direct assessment (testing) perspective (Matafwali, Shallwani & Sibanda, 2012).

The ZamCaT is a population measure administered to preschool children along with the standard population-based household survey. For the current study not all domains of the ZamCat were used because of the limited time and resources. The ZamCAT reports reliability values of Cronbach's Alpha coefficients for fine motor 0.79", receptive language 0.83 and pattern reasoning 0.75. This shows that the internal consistency of these tasks is acceptable for social science research.

Reliability analysis was conducted and the Cronbach's Alpha for the items on the instrument of daily experiences and quality of care ranged from .520 to .998. Reliability score for Safety was .773, health .520, nutrition .898, pre-service training .991, curriculum .813, Professional staff development .998 and health was .603.

3.5 DATA ANALYSIS:

Data was analysed using an independent t-test, ANOVA and frequencies using Statistical Package for Social Sciences (SPSS) v.16. Turkey post-hoc was used to ascertain whether the significant values of the ANOVA test were real. This is because the Turkey post hoc uses true differences when comparing the variables. Qualitative data was analysed according to themes.

3.6 ETHICAL CONSIDERATION:

This study was approved by The University of Zambia Humanities and Social Sciences Research Ethics Committee. The data collected will be specifically used only for the purpose of this study and may be used for reference in future studies. The participants as well as the preschools will remain anonymous to avoid stigma from parents when choosing the right day care centres for their children. Preschools and the participants were informed about their right to withdraw from the study whenever they wanted to.

CHAPTER FOUR

PRESENTATION OF FINDINGS

OVERVIEW

The results presented in this chapter describes and explains the quality care, daily experiences and developmental outcomes of children enrolled in the selected care centres. A total number of 6 preschools were sampled for the study. Head-teachers from the six preschools were interviewed and child assessments (53) were conducted in all the six preschools. The results presented are both qualitative and quantitative. Qualitative results include observations and field notes collected from the school head-teachers that were analysed qualitatively. The qualitative results compliment the quantitative results hence being presented as support for the available statistics. The pre-schools are in three categories with pre-school A and B having more adequate quality care, pre-school C and D have moderate quality care and pre-school E and F are categorised as having inadequate quality care. To assess differences in child assessment as a function of the preschool and other demographic characteristics, t-tests, and analysis of variance (ANOVA) were performed.

Table 1: Classification of Preschool

Assessed areas	**Adequate preschools AB**	**Average Preschools CD**	**Inadequate Preschools EF**
Teacher qualifications (Pre/In-service)	Degree, Diploma, Certificates	Diploma, Certificates	Certificates
Teacher-Child Ratio	1:15	1:20	1:30

Teacher Salary	K3,000	K1,500	K500
Class space	Large	Medium	Small
Furniture	Child friendly furniture	Child friendly furniture	Child friendly furniture
Running water/Hand wash Soap	Running Water Present,	Running Water present,	No Running Tap Water
	Soap present	No Soap	No Soap
Indoor play and learning materials	Books, crayons, clay dough, blocks available and toys.	Crayons, story books	None
Outdoor space	Big	Medium	Small
Outdoor play equipment	Present	Not present	Not present
Number of toilets/Children per class	8/15	2/20	2/30

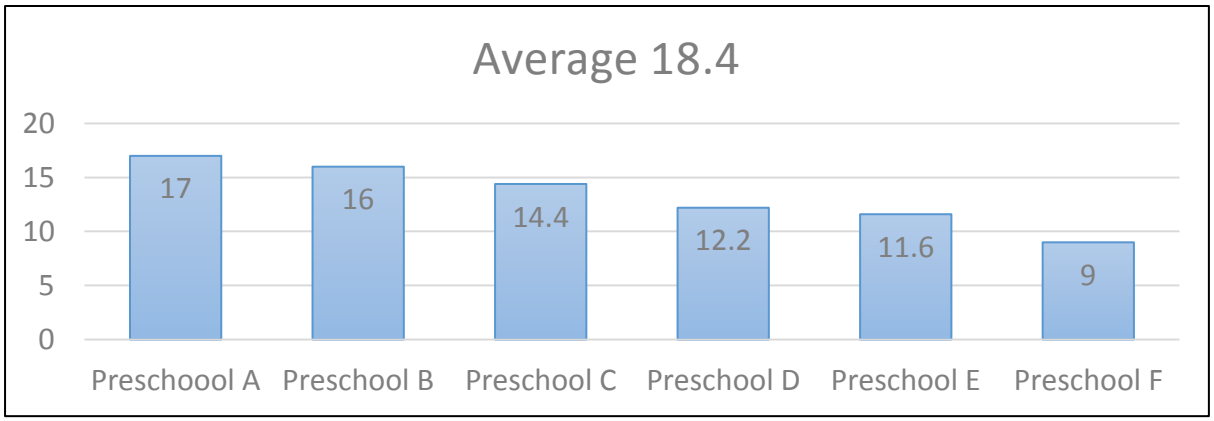
4.1 OBJECTIVE ONE

To explore the ECE daily experiences of children in preschools, variables were assessed using observations and a questionnaire. The daily experiences in this study include safety, nutrition, play, health, and parent-children-teacher interactions. Table:2 is showing detailed individual pre-school scores on each daily experience variable. From the average score of 18.4; pre-school A and B scored 17 and 16 respectively while pre-schools D and C scored 14.4 and 12.2. Pre-school E scored 11.6 and pre-school F had the lowest score of 9.

Table2: Individual Preschool Daily Experience Results

	PA	PB	PC	PD	PE	PF	Total
DES	18	17	13	15	13	11	19
DEN	19	16	18	12	12	5	21
DEP	13	13	11	10	8	9	13
PCT	25	23	22	19	20	16	27
DEH	10	11	8	5	5	4	12
	17	16	14.4	12.2	11.6	9	18.4

Figure1: Average Scores of Daily Experiences



Children in preschools experience almost the same things each day. They spend most of their time indoors and only go out when it is time to use the bathroom, eat, time to knock off and at least a day when they have sporting activities during the week. They also rest on other holidays that are used for entertainment activities such as family fair day and with educational tours. The children report to the pre-schools at around 07:30 hours and knock off around 16:00 hours. During this time, they also learn how to be organised in life. The children are taught how to use the toilet, eat, and sleep at appropriate times. In preparation for grade school, they are taught sounds, how to write, spell and read words. In all the pre-school

centres in the current study, children are also taught how to pay attention and listen through the story time section that they have every morning.

The children in reception class have a daily routine of learning the alphabet, handwriting, pre-math, social studies, colouring and drawing and other extracurricular activities such as sports which are done at least once each week. These children are taught how to be good and organised learners by instructing them to lift up their hands whenever they want to answer or ask questions, pay attention and listen to the teacher without making noise or fighting with other children. The children are also taught how to not run around to avoid injuries and how to respect others by waiting in line without pushing, which also teaches them patience. This is done by arranging them in a line when going to eat, toilet, when going to the assembly and playground.

Time spent in school

All the assessed children arrive around 07:30 hours to 08:00 hours in their various preschool environments and children from two preschools spend most of their day in the preschool environment. Two school reported that children in their schools knock off at 12 hours and 14 hours as indicated in table:3

Table3: Knocking off and Pick up time

Pick up time				
		Frequency	Percent	Valid Percent
Valid	12hrs	1	16.66667	16.66667
	14hrs	1	16.66667	16.66667
	16hrs	4	66.66667	66.66667
	Total	6	100	100

Nutrition

To explore the eating habits of children, the study deliberately sought to know the type of foods packed from home, whether preschools prepared food and what children preferred to eat. This was to try and explore whether preschool enrolment especially at an early age can affect a child's nutrition. Table 4 and table 5 show foods that parents pack and which food children prefer to eat.

Table4: Nutrition, eating prevalence for children.

		Prefer eating Fruits and veggies			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	2	33.3	33.3	33.3
	yes	4	66.7	66.7	100
	Total	6	100	100	
		Prefer biscuits			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	1	16.7	16.7	16.7
	yes	5	83.3	83.3	100
	Total	6	100	100	
		Prefer fried foods			

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	2	33.3	33.3	33.3
	yes	4	66.7	66.7	100
	Total	6	100	100	
		Prefer drinks			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	1	16.7	16.7	16.7
	yes	5	83.3	83.3	100
	Total	6	100	100	
		Prefer water			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	4	66.7	66.7	66.7
	yes	2	33.3	33.3	100
	Total	6	100	100	
		Prefer boiled foods			
		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	no	4	66.7	66.7	66.7
	yes	2	33.3	33.3	100
	Total	6	100	100	

Table5: Most packed type of food by parents.

		Pack fried foods			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	1	16.7	16.7	16.7
	yes	5	83.3	83.3	100
	Total	6	100	100	
		Pack fruits and veggies			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	2	33.3	33.3	33.3
	yes	4	66.7	66.7	100
	Total	6	100	100	
		Pack biscuits			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	1	16.7	16.7	16.7
	yes	5	83.3	83.3	100
	Total	6	100	100	
		Pack drinks			
		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	yes	6	100	100	100
		Pack water			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	2	33.3	33.3	33.3
	yes	4	66.7	66.7	100
	Total	6	100	100	
		Pack boiled foods			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	3	50	50	50
	yes	3	50	50	100
	Total	6	100	100	

4.2 OBJECTIVE #2

To assess the ECE quality of care in pre-schools the variables considered include teacher qualifications, pre-service training, continuous professional development, teacher salaries, child teacher ratio, regulation, and monitoring.

MONITORING AND REGULATION.

Government monitoring and regulation was assessed to know whether the participating preschools were being monitored by the Ministry of Education

Table:6 Results for Government monitoring, and regulation

		Population			
		Frequency	Percent	Valid Percent	Cumulative Percent

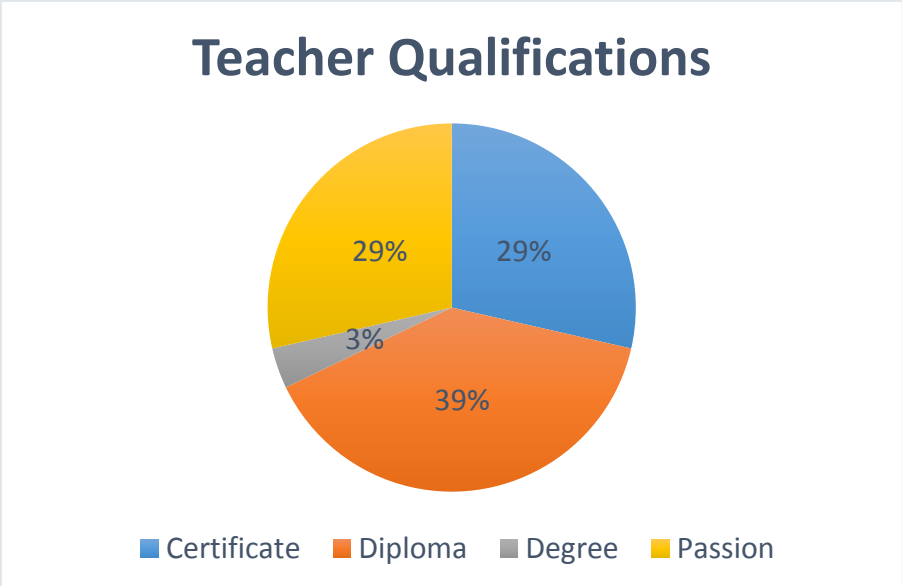
Valid	14	1	16.7	16.7	16.7
	30	1	16.7	16.7	33.3
	40	1	16.7	16.7	50
	115	1	16.7	16.7	66.7
	154	1	16.7	16.7	83.3
	268	1	16.7	16.7	100
	Total	6	100	100	
		Monitoring			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than a month ago	1	16.7	16.7	16.7
	six months ago	1	16.7	16.7	33.3
	one year ago	2	33.3	33.3	66.7
	never been visited	2	33.3	33.3	100
	Total	6	100	100	
		Regulation			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	3	50	50	50

	yes	3	50	50	100
	Total	6	100	100	
		First Aid Kit			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	1	16.7	16.7	16.7
	yes	5	83.3	83.3	100
	Total	6	100	100	

TEACHER QUALIFICATIONS

On teacher qualifications, it was expected that more teachers have a degree as their highest qualification as stated in the "Zambian Standard of Child Care document, 2014". However as indicated in figure 3: only 3% have a degree, 39% diplomas, 29% certificates and 29% carers without any qualifications.

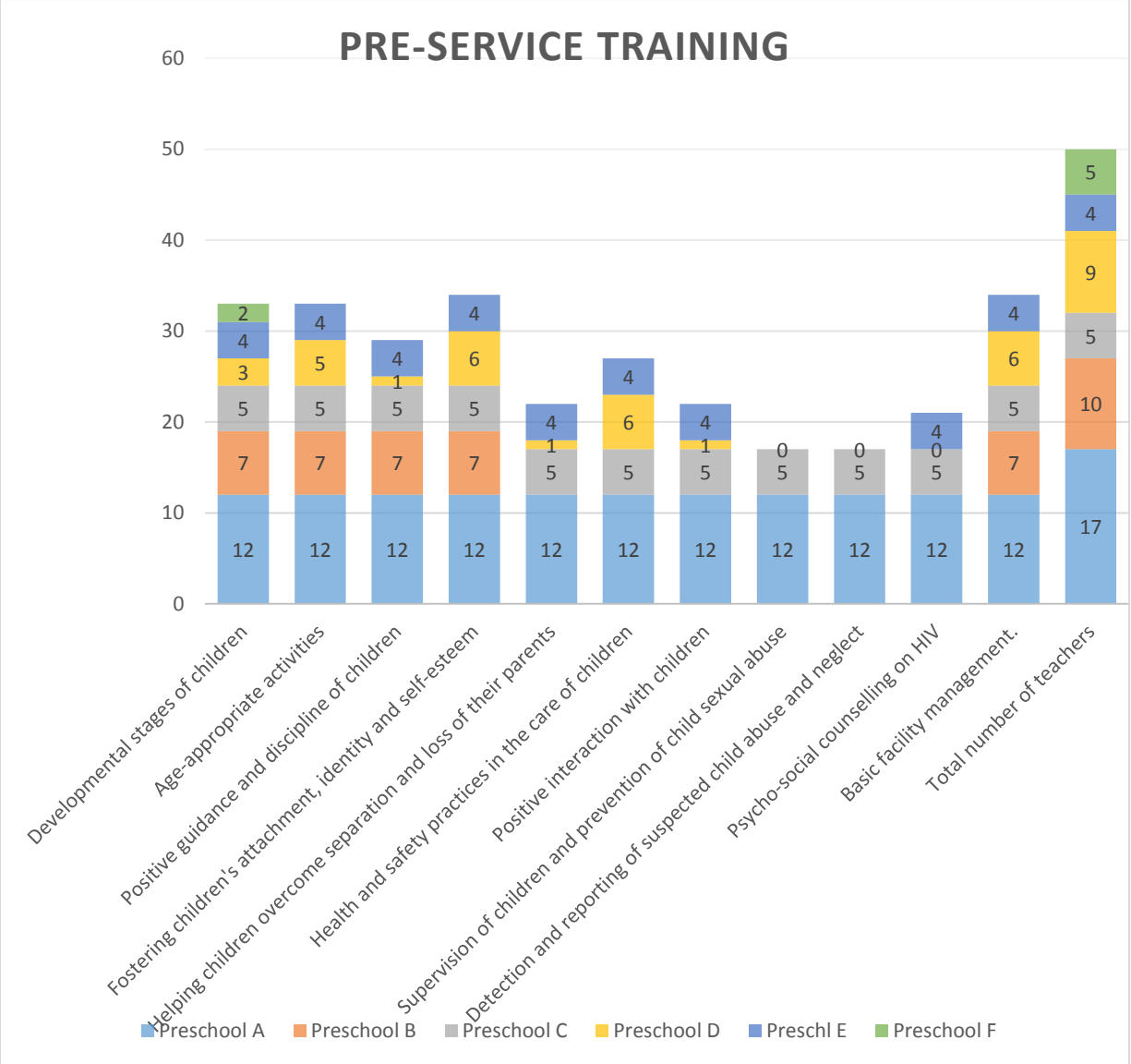
Figure2: Teacher Qualifications



PRE-SERVICE TEACHER TRAINING

According to the Zambia Standard of Child Care (2014) document which has been used as a guide in this study, it is mandatory for teachers to have pre-service training in the following areas of childcare. 1) Developmental stages of children, 2) age appropriate activities, 3)positive guidance and discipline of children, 4)fostering children's attachment, identity and self-esteem, 5)helping children overcome separation and loss of their parents, positive interaction with children, 6) supervision of children and prevention of sexual abuse and neglect, 7) detection and reporting of suspected child abuse and neglect, 8) psycho-social counselling on HIV and 10) Basic facility management. Figure 2: is showing numbers of teachers in each pre-school that have pre-service training in the mentioned required areas. Pre-schools A and C reported having 12 and 5 teachers with pre-service training in all required areas, respectively. Pre-school B has 7 teachers with training in at least five areas and Pre-school E has 4 teachers with pre-service training in nine areas. While pre-school F only reported having two teachers with pre-service training in developmental stages of child development. On the other hand, pre-school D reported different numbers of teachers trained in different pre-service required areas.

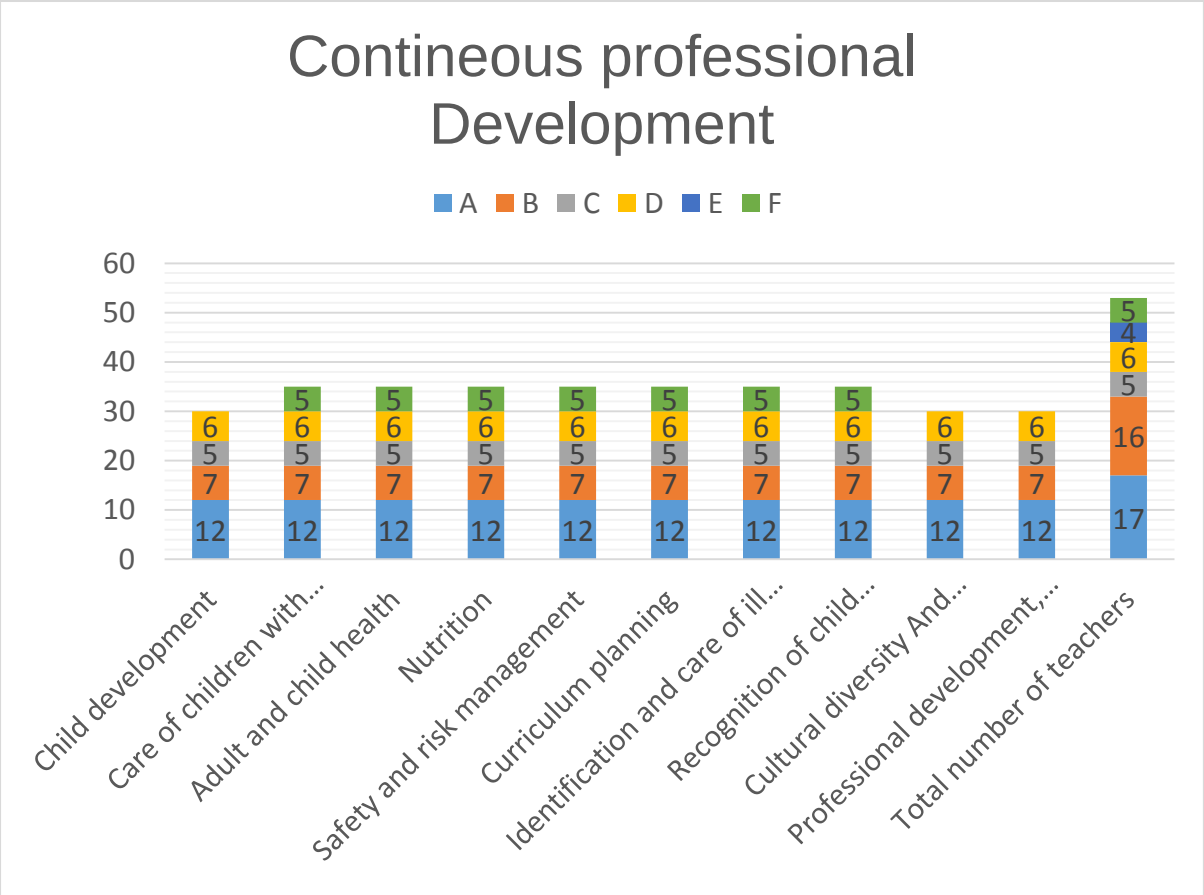
Figure3: Pre-service training



IN-SERVICE TRAINING

It is a requirement that teachers undergo at least 15 hours of in-service training every year to facilitate continuous professional development among teachers. This is to ensure that teachers are fully equipped with current teaching methods and information as the world evolves. In figure 3: pre-school A reported that the teachers underwent training during each school holiday. Pre-school E reported that none of the teachers had been undergoing in-service training, while pre-schools C and D reported that their teachers underwent some training. Preschool B reported that the teachers underwent in-service training annually. While pre-school F reported that the 5 teachers have undergone training in at least seven required areas.

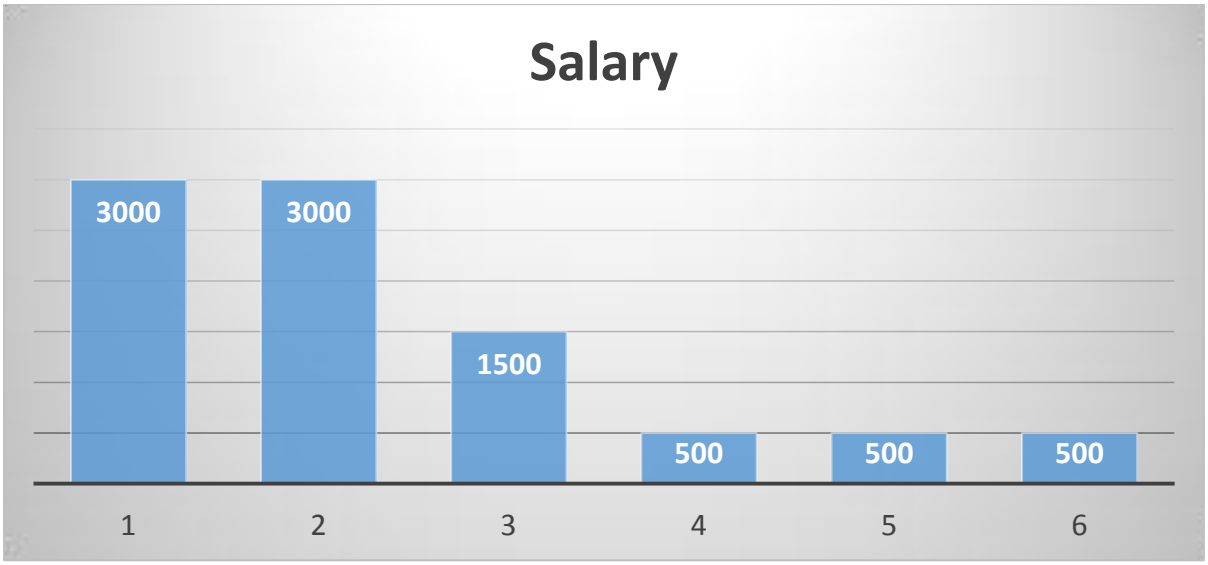
Figure4: Continuous Professional Development



TEACHER SALARIES

In figure 4, Two pre-schools pay their teachers a monthly salary of three thousand Zambian kwacha. One pre-school pays one thousand five hundred Zambian kwacha and three pre-schools pay five hundred Zambian kwachas.

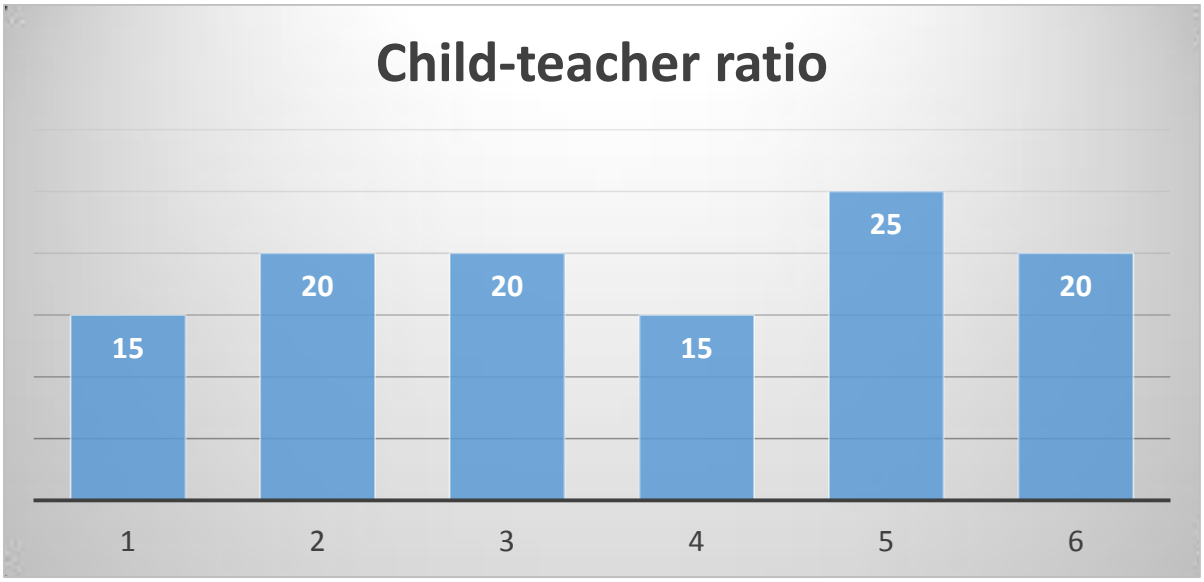
Figure5: Salary Scales



CHILD-TEACHER RATIO

Child-teacher ratio should at least be a minimum of 15 children per teacher. Observations indicated at least 30 children with 2 teachers in preschools A and B. While pre-schools C and D had about 11 and 15 children per 1 teacher, respectively. Pre-schools E and F had close to 30 children to 1 teacher. Figure 5 is showing numbers as reported by the pre-schools. The ratios represent total number of children in class per teacher.

Figure5: Child Teacher ratio.



3 OBJECTIVE #3

To compare whether pre-schooler's developmental outcomes differ based on attending adequate or inadequate care preschools. Child developmental outcomes were analysed to compare developmental differences that may exist because of being enrolled in either adequate, average, or inadequate care preschools. The results from the ZamCat scales were analysed in SPSS using Analysis of Variance, the dependent variables were receptive, expressive, letter naming, fine motor, and pattern reasoning. The independent variable was quality of care in preschools and developmental outcomes were dependent variables. The assessed children were 18 (4 years) and 35 (5 years) bringing the total to 53 children. The girls and boys were 28 and 25, respectively. ANOVA analysis indicated a significant difference in receptive language development, Letter naming exercise and Fine motor development.

A Tukey post hoc analysis was used to determine which categories had real significant differences. According to the ANOVA analysis results there is a difference in the receptive language development of children from the inadequate, average, and adequate pre-schools with *F (2.50) = 6.92, P=.002*. The post-hoc test using Turkey HSD however indicated a larger statistically significant difference in the receptive language development between children enrolled in inadequate care preschools N (20) (M=21.45, SD= 3.45)and children enrolled in adequate care N (13) with (M=25.76, SD=3.67) at(*MD=4.319)* -3.500) , than between children enrolled in average care preschools N(20) (M=24.9, SD=3,88) and children enrolled in adequate quality of care preschools at *(MD=3.500).*

A statistically significant difference was also recorded in letter naming exercise between children enrolled in inadequate, average, and adequate pre-schools with *F (2.50) = 4.32, P=.019* according to the ANOVA test analysis. Evidence from the post hoc results

showed that the real significant differences exist between children enrolled in average care preschools N(20)((M=11.85, SD=10.94) and adequate N(13) (M=21.30, SD=7.00) with the difference at *(MD= 9.457*) and inadequate N(20) (M=12.15 SD= 10.40) and adequate the difference at *(MD=9.157).* Post hoc results clearly indicated no significance differences in fine motor developmental outcomes of children from the three preschool categories.

Using SPSS, an independent t-test was done to assess gender and age differences that may exist in developmental outcomes of the study sample without taking into consideration the category of preschool these children came from. The independent samples t-test as indicated in table:9 show no differences in the developmental outcomes of assessed children aged four N 18) and five N(35). An independent samples t-test was also used to assess developmental differences between the assessed girls and boy. After a t-test analysis, table:11 shows no differences in developmental outcomes between girls N(28) and boys N(25)

Table7: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Receptive	inadequate	20	21.4500	3.45612	.77281	19.8325	23.0675	17.00	28.00
	average	20	24.9500	3.88621	.86898	23.1312	26.7688	12.00	30.00
	adequat	13	25.7692	3.67772	1.0200	23.5468	27.991	20.00	30.0

	e				2		7		0
	Total	53	23.8302	4.07495	.55974	22.7070	24.9534	12.00	30.00
Patten reasoning	inadequate	20	2.6500	5.44131	1.21671	.1034	5.1966	.00	18.00
	average	20	5.2000	7.26636	1.62481	1.7992	8.6008	.00	18.00
	adequate	13	7.8462	7.35806	2.04076	3.3997	12.2926	.00	18.00
	Total	53	4.8868	6.83785	.93925	3.0020	6.7715	.00	18.00
Fine motor	inadequate	20	7.7500	1.58529	.35448	7.0081	8.4919	4.00	10.00
	average	20	6.6500	2.30046	.51440	5.5734	7.7266	1.00	10.00
	adequate	13	8.1538	1.34450	.37290	7.3414	8.9663	5.00	10.00
	Total	53	7.4340	1.91662	.26327	6.9057	7.9622	1.00	10.00
Letter naming	inadequate	20	12.1500	10.40382	2.32636	7.2809	17.0191	.00	26.00
	average	20	11.8500	10.94135	2.44656	6.7293	16.9707	.00	26.00
	adequate	13	21.3077	7.00458	1.94272	17.0749	25.5405	5.00	26.00
	Total	53	14.2830	10.53452	1.44703	11.3793	17.1867	.00	26.00

Expressive	inadequate	20	3.2500	1.94327	.43453	2.3405	4.1595	.00	5.00
	average	20	4.3000	1.08094	.24170	3.7941	4.8059	1.00	5.00
	adequate	13	4.0769	1.49786	.41543	3.1718	4.9821	1.00	5.00
	Total	53	3.8491	1.59803	.21951	3.4086	4.2895	.00	5.00

Table8: Test of Homogeneity of Variances

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Receptive	.441	2	50	.646
Patten reasoning	4.061	2	50	.023
Fine motor	.734	2	50	.485
Letter naming	8.058	2	50	.001
Expressive	11.543	2	50	.000

Table9: ANOVA Analysis

		Sum of Squares	Df	Mean Square	F	Sig.
Receptive	Between Groups	187.264	2	93.632	6.923	0.002
	Within Groups	676.208	50	13.524		
	Total	863.472	52			
Patten reasoning	Between Groups	215.878	2	107.939	2.436	0.098
	Within Groups	2215.442	50	44.309		
	Total	2431.321	52			
Letter naming	Between Groups	850.885	2	425.443	4.324	0.019
	Within Groups	4919.869	50	98.397		
	Total	5770.755	52			
Expressive	Between Groups	11.919	2	5.96	2.465	0.095
	Within Groups	120.873	50	2.417		

	Total	132.792	52			
Fine motor	Between Groups	21.027	2	10.513	3.092	0.054
	Within Groups	169.992	50	3.4		
	Total	191.019	52			

Table10: Post-hoc Analysis

Tukey HSD							
Dependent Variable	(I) Quality of care	(J) Quality of care	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Patten reasoning	Inadequate	Average	-2.55	2.10497	0.452	-7.6344	2.5344

		Adequate	-5.19615	2.37146	0.083	-10.9242	0.5319
	Average	Inadequate	2.55	2.10497	0.452	-2.5344	7.6344
		Adequate	-2.64615	2.37146	0.509	-8.3742	3.0819
	Adequate	Inadequate	5.19615	2.37146	0.083	-0.5319	10.9242
		Average	2.64615	2.37146	0.509	-3.0819	8.3742
Letter naming	Inadequate	Average	0.3	3.13684	0.995	-7.2768	7.8768
		Adequate	-9.15769*	3.53396	0.033	-17.6937	-0.6217
	Average	Inadequat	-0.3	3.13	0.9	-7.876	7.27

		e		684	95	8	68
		Adequate	-9.45769*	3.53396	0.027	-17.9937	-0.9217
	Adequate	Inadequate	9.15769*	3.53396	0.033	0.6217	17.6937
		Average	9.45769*	3.53396	0.027	0.9217	17.9937
Expressive	Inadequate	Average	-1.05	0.49168	0.093	-2.2376	0.1376
		Adequate	-0.82692	0.55392	0.303	-2.1649	0.511
	Average	Inadequate	1.05	0.49168	0.093	-0.1376	2.2376
		Adequate	0.22308	0.55392	0.915	-1.1149	1.561
	Adequate	Inadequat	0.826	0.55	0.3	-0.511	2.16

		e	92	392	03		49
		Average	-0.22308	0.55392	0.915	-1.561	1.1149
Fine motor	Inadequate	Average	1.1	0.58308	0.153	-0.3084	2.5084
		Adequate	-0.40385	0.6569	0.813	-1.9905	1.1828
	Average	Inadequate	-1.1	0.58308	0.153	-2.5084	0.3084
		Adequate	-1.50385	0.6569	0.067	-3.0905	0.0828
	Adequate	Inadequate	0.40385	0.6569	0.813	-1.1828	1.9905
		Average	1.50385	0.6569	0.067	-0.0828	3.0905

Receptive	Inadequate	Average	-3.50000*	1.16293	0.011	-6.309	-0.691
		Adequate	-4.31923*	1.31016	0.005	-7.4838	-1.1546
	Average	Inadequate	3.50000*	1.16293	0.011	0.691	6.309
		Adequate	-0.81923	1.31016	0.807	-3.9838	2.3454
	Adequate	Inadequate	4.31923*	1.31016	0.005	1.1546	7.4838
		Average	0.81923	1.31016	0.807	-2.3454	3.9838
*. The mean difference is significant at the 0.05 level.							

Table #11 t-test analysis for age

Group statistics	Age	N	Mean	Std. Deviation	Std. Error Mean
Receptive	4	18	22.6666667	2.950573224	0.695456778
	5	35	24.4285714	4.467435863	0.755134486
Patten reasoning	4	18	3.5	5.65945331	1.333945938
	5	35	5.6	7.345266583	1.241576661
Letter naming	4	18	12.6111111	11.24140921	2.649625561
	5	35	15.1428571	10.21286057	1.726288513
Expressive	4	18	3.27777778	1.840893503	0.43390276
	5	35	4.14285714	1.396273552	0.236013307
Fine motor	4	18	7.22222222	2.184317246	0.514848512
	5	35	7.54285714	1.787914611	0.302212728

The study had *N* (18) four years old and *N* (35) five years old .

Table12

Column 1	**Column2**	**Column3**	**Column4**	**Column5**	**Column6**	**Column7**	**Column8**	**Column9**	**Column10**	**Column11**

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper

Receptive	Equal variances assumed	2.2552	0.13933	-1.5089	51	0.1375	-1.762	1.16768	-4.106	0.5823
	Equal variances not assumed			-1.71627	47.62	0.0926	-1.762	1.02659	-3.826	0.3026
Patten reasoning	Equal variances assumed	6.6104	0.0131	-1.0601	51	0.2941	-2.1	1.98094	-6.077	1.8769
	Equal variances not assumed			-1.15236	43.06	0.2555	-2.1	1.82234	-5.775	1.575
Letter naming	Equal variances assumed	0.7772	0.38214	-0.82605	51	0.4126	-2.532	3.06488	-8.685	3.6212
	Equal variances not assumed			-0.80058	31.64	0.4293	-2.532	3.16237	-8.976	3.9126
Expressive	Equal variances assumed	6.1262	0.01668	-1.91357	51	0.0613	-0.865	0.45208	-1.773	0.0425
	Equal variances not assumed			-1.75514	27.35	0.0911	-0.865	0.49394	-1.878	0.1478
Finemot	Equal	0.53	0.46	-	51	0.56	-	0.559	-	0.802

or	variances assumed	68	712	0.57304		91	0.321	53	1.444	7
	Equal variances not assumed			-0.53708	29.01	0.5953	-0.321	0.59699	-1.542	0.9003

Table #13 Table t-test analysis for gender differences

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Receptive	Girls	28	23.5357143	3.87281258	0.73189278
	Boys	25	24.16	4.34626276	0.86925255
Patten reasoning	Girls	28	3.60714286	5.65907521	1.06946469
	Boys	25	6.32	7.82474707	1.56494941
Letter naming	Girls	28	14.75	10.8819422	2.05649378
	Boys	25	13.76	10.3290851	2.06581703
Expressive	Girls	28	3.46428571	1.71014712	0.32318743
	Boys	25	4.28	1.36991484	0.27398297
Fine motor	Girls	28	7.14285714	2.39929443	0.45342403
	Boys	25	7.76	1.12842073	0.22568415

Table 12

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
Receptive	Equal variances assumed							1.12883	-2.891	1.642	
	Equal variances not assumed			-0.54938	48.473	0.58527	-0.624	1.13634	-2.909	1.66	
Patten reasoning	Equal variances assumed	10.08589	0.0025	-1.45734	51	0.15115	-2.713	1.86151	-6.45	1.024	
	Equal variances not assumed			-1.43123	43.2637	0.15955	-2.713	1.89547	-6.535	1.109	
Letter naming	Equal variances assumed	0.106149	0.7459	0.33861	51	0.73629	0.99	2.9237	-4.88	6.86	
	Equal variances not assumed			0.33963	50.7955	0.73553	0.99	2.91492	-4.863	6.843	
Expressive	Equal variances assumed	6.532391	0.0136	-1.90115	51	0.06294	-0.816	0.42906	-1.677	0.046	
	Equal variances not			-	50.4	0.05	-	0.423	-1.667	0.0	

	assumed			1.92524	434	985	0.816	69		35
Finemotor	Equal variances assumed	8.250065	0.0059	-1.17446	51	0.24567	-0.617	0.52547	-1.672	0.438
	Equal variances not assumed			-1.21848	39.3201	0.2303	-0.617	0.50648	-1.641	0.407

CHAPTER FIVE

DISCUSSION OF FINDINGS

OVERVIEW

This chapter will discuss the daily experiences of children in relation to developmental outcomes, quality of care in relation to developmental outcomes and lastly discuss differences in the developmental outcomes of children enrolled in the three types of pre-schools in relation to quality of care and daily experiences.

5.1 Daily Experiences and Developmental outcomes

According to Mwamwenda (2014, p1403) children who have had ECE experience "present the following advantages: less likely to repeat classes and less likely to drop out of school". ECE should lead to higher achievement scores, higher completion rate in subsequent years of education and low correlation between such children and criminal activity. "Hence the argument for classifying ECE as an integral component of formal education system, which currently is not the case in the majority of African Union countries" Mwamwenda (2014). In Zambia, the Ministry of Education stated in its Strategic Plan 2003-2007 stated that Early Childhood Care and Education is an integral part of basic education, especially in the rural areas (Thomas & Thomas, 2009). Therefore, ECE experience should contribute positively to child development and not result in negative outcomes.

The daily experiences in the current study refer to the different everyday situations that children face in the pre-schools such as playing, eating patterns, interactions, safety, and learning. These are situations that can either help a child to learn and adapt well to their environment or situations that cannot contribute to a child's learning and in some cases may pose a danger to child development**.** To explore these daily experiences of children; the researchers focus was on the safety, health and nutrition, discipline, and play. The factors

considered are an important aspect of quality care and child development. The children in all assessed preschools have a daily routine of learning the alphabet, handwriting, pre-math, social studies, colouring and drawing and other extracurricular activities such as sports which are done at least once each week. These children are taught how to be good and organised learners by instructing them to raise up their hands whenever they want to answer or ask questions. The children are also taught how to not run around carelessly to avoid injuries and how to respect others by waiting in line without pushing, which also teaches patience. This is done by arranging them in line when going to eat, toilet, when going to assembly and playground.

All the pre-schools observed, have a daily routine of learning the alphabet for the children, According to Szanton (1997), the daily activities and routines teach children how to adapt to their environment. It can be simple arrival greetings and departures, observing how other children feed or dress up themselves help the child to imitate behaviour and in the process be empowered with such skills. In addition, in all preschool's children are taught Christian values, they are taught how to pray, praise God, and recite bible verses. Reciting bible verses and singing songs is a good way to improve cognitive skill such as memory and language. This is done every Monday, or Friday in all these pre-schools. There was no difference in teaching Christian values in all assessed preschools whether government or private preschool.

All the pre-schools reported not spanking child and talking to child to correct child mistakes. 44.44% reported not calling parents when behavioural problems among children occur compared to 55.56 who reported calling parents to help with disciplining children. 77.8 reported that they do not make a child to recite something when they behave badly and only 22.2 reported doing so. The percentage of day care centres that reported not using isolation as a behavioural management technique was 33.3% and 66.7% reported using isolation in child

behavioural management. During observations in pre-school B, the teacher kept on threatening the children that if they do not pay attention and behave, she will move them from reception to baby class. She said, *"If you misbehave, I will take you to baby class because it is only the babies who misbehave".* On the other hand during the observations in pre-school E, the teacher actually took one boy to baby class from reception and the child was in a different class for about 3 hours as a way to discipline the child who did not want to take part in writing. The teacher from pre-school E said that this child has a tendency of not writing because he does not want. She said the boy knows how to write but he just does not want to participate in writing when given work to write because he is lazy. In addition, at least 33.3% of pre-schools reported that they involve parents when disciplining the children by calling their parents and the other 33.3% reported the opposite. Looking at the disciplining measures to be used on children, the minimum standards of care document does give options of how children can be disciplined (Ministry of Community Development Mother and Child Health, Minimum standards of care for child development in Zambia). It only gives command on what should not be done and not what should be done. Therefore, it is not easy for some teachers to discipline a child without threating, shouting, or even using harsh words for a child to listen.

Health and nutrition are another important aspect of child development. It is the responsibility of parents and preschool administration to plan and offer good nutrition to all children. The preschool administration and the parents must communicate and plan together to promote child health through proper nutrition. The health pre-school policy states that the children in all institutions which include pre-schools should be given proper nutrition which means a good balanced diet (Minimum standards of care for child development in Zambia, 2014). However, some children enrolled in either adequate, average or inadequate preschool centres have eating behaviours that may not contribute positively to their health. From the

results of three assessed preschools, it is evident that some that children in preschools experience eating problems sometimes and most of the times. Now if children spend more time from the home environment, it can mean they have nutritional deficiencies. It was also reported that most times these children go back home without eating their packed food meaning they spend their time in preschool environment snacking on foods that do not have any nutritional value. Often, parents may pack fruits and vegetables and some preschool centres also reported that some children prefer to eat the vegetables and fruits that the parents pack. Fried foods, biscuits, and drinks are packed most times by parents and all six preschools reported that drinks are packed most often unlike water which was reported by only to be less parked. Some preschool centres reported that parents often pack boiled foods and only two of the centres reported that children prefer to eat the packed boiled foods. The remaining preschools reported that children prefer to eat fried foods. However, only 3 preschool centres reported that children also prefer to drink water.

Health and nutrition are another important aspect of child development. It is the responsibility of parents and preschool administration to plan and offer good nutrition to all children. The preschool administration and the parents must communicate and plan together to promote child health through proper nutrition. The health pre-school policy states that the children in all institutions which include pre-schools should be given proper nutrition which means a good balanced diet (Minimum standards of care for child development in Zambia, 2014).The pre-schools help the parents by preparing food for the children to eat while at school. This is done at a cost or freely. In one adequate preschool, 1 average preschool and 2 inadequate preschools, food is either prepared for children to eat during lunch time and or the parents can park or bring for them. The food prepared at school can help the children to eat a well-balanced diet during lunch time because it can be well planned for. In one of the average pre-schools, children knock off around 12:00 hours and they eat at their homes which

is a good thing because they find well planned meals at home despite family challenges. One of the adequate preschools also allows the parents to order food that their child should eat every day at the canteen which gives the parents an opportunity to create their child's menu in the school and plan accordingly.

In one of the average preschools, food is prepared for all the children, but it does not include meat. According to the head teacher, meat such as pork is allergic to some children therefore it is important to just have a meat free menu. She said that; *"Here we do not include meat in the children's menu because some children are allergic to meat such as pork and others do not eat such in their homes. Many times, we prepare fish for them. We provide lunch for the children if the parents have paid for lunch. But we have parents who prefer to give their children money so that they buy food from the super market across the road but it is not safe because so many vehicles pass in this road and these children will go outside the gate without telling any teacher*.

Another adequate care preschool has a menu for children stuck in the head teacher's office so the parents can have an idea of the foods that their children eat at school for lunch. One of the teachers in this pre-school said, *"These children are only required to carry snacks for break time because lunch is prepared for them".* The menu stuck in the head teachers' office includes food that are rich in vitamins, carbohydrates, minerals and protein such as nshima, meat and green vegetables in line with the requirement in the Minimum Standard of Care document for young children in Zambia. In another inadequate care preschool, the head teacher stated that, *"it is good for parents to just pay for food so that the school prepares the children's food on time because on so many times parents bring food late and this even disturbs our time for learning because we allow the children to eat their food which has been brought late before we can continue with learning. These children also get very hungry when they see their friends eating while waiting for their food to be brought".*

All the pre-schools were found to be practicing good health and hygiene practices such as having clean water and soap for children to wash hands before eating and after using the toilets. The pre-schools had well covered rubbish bins even when others where keeping the rubbish in sac bags. Two of pre-schools however did not have taps and toilets with running water at the time of observations but had clean water stored in well covered buckets for children to use.

Safety is another important aspect of child development. Without safety, the child may not develop fully because of fear and injuries. Therefore, to assess the safety of children in pre-schools, the researcher tied to see whether these children are always under teacher supervision. The researcher also looked at whether the children's environments have at least a wall fence that protects them from strangers and from other dangers such as vehicles that pass near the pre-schools. Only two of the pre-schools reported that they provide transport for the children to and from school. Four of pre-schools reported not providing transport for children to and from school. This is because of various reasons that may result out of the parents' decisions or the school policy on transportation of children. For example, a female teacher from one average care preschool said that "*if parents are divorced it is not easy for teachers to know where the child will be staying and may contribute to fights between parents".*

Another female head teacher from average care preschool said that, *"we do not provide transport for our children because of an incident that occurred once at school within our area where a defilement case was reported because the driver was left with only one girl child on the school bus. And because he did not find the parents of the child at home, as he waited, he decided to defile the child before dropping her off".* While in one adequate preschool, one of the teachers stated that *"it is the parents' decision whether to pay the pre-school for their child's transport or for them to organise their own transport".* In addition, the children in all the observed pre-schools are not just picked up by anyone unless if the

registered people who pick up a child are not available to do so. The parents, however, communicate with the teachers if such a situation happens and are told in advance who will pick up the child on their behalf.

According to (Shikwesha, 2014), a child's environment must be physically safe, socially enhancing, emotionally nurturing, and intellectually stimulating. Classrooms should also be well equipped, with sufficient appropriate materials and toys. A well carefully designed setting promotes self-selection by children from a wide array of age appropriate materials. The environment whether in classroom or playground should be inviting and enable children to engage in active learning whereby they construct their own knowledge through interaction with adults, other children, and environment. In line with Shikwesha's (2014) argument, most of the pre-schools in the current study where found to have at least good and safe environments. The environments are enclosed in a wall fence and the school electric wires and cooking places are not accessible by the children, they cover their garbage well even when some pre-schools do not have proper rubbish bins.

Britto et al (2011) states that "In the developing world, reducing exposure to accidents and unanticipated threats is a key feature of quality, and highly dependent on context". In line with Britto et al (2011), it was observed in some of the pre-schools that their kitchens are outside kitchens where children can reach at any time and pose a danger of being burnt. However, in one of the pre-schools, the head teacher argued that *"After cooking, we put away the braziers and the fire so that the children are not at risk of being burnt".* The pre-school realises the danger of not having a formal kitchen and hence the food is prepared while the children are still in class. When the children come out to eat, the fire is already put off and a teacher guides them to prevent any accidents. Having well-built formal kitchens in schools is

a way of reducing exposure to accidents and improving the safety of children in the environment.

In one of the adequate care pre-schools, it was found that children do not only have a formal kitchen they also have a canteen where they eat their food from. This experience teaches the child that specific places are used for specific things. A child learns that a classroom is a place for learning and a canteen is a place for eating. This helps the child to have order in their way of doing things. In three of the pre-schools, the classrooms are big enough to accommodate eating time without children bumping into each other and allowing each child space for their eating time. These pre-schools do not have separate eating places, but the children still have enough room in class for this activity and indoor play.

On the other hand, the remaining two inadequate preschools have small overcrowded classrooms which get even more overcrowded when it is eating time. Some children accidentally spill their food which leads to crying, tantrums, and messy uniforms. The rooms are too small without good ventilation. Indoor play cannot be done because the desks are too close to each other with an exceedingly small passage space. Therefore Iruka, Mount-Cors, Odom, Naoom and Van Dyke (2012), argued that that Zambia should focus much of its resources and attention on centre-based ECD programs. The importance should be to have policies that address the building, upkeep of the structures and the furnishing to ensure the safety and health of children, including the play parks.

From the observed nine pre-schools, only two of the pre-schools have well-built play parks with playing equipment such as swings, slides, and many other playing materials which include sand areas. The remaining seven have no playgrounds and the children only get to have outdoor play when they are taken to an open ground for sports, or when taken out to other public play parks for tours. It is important for all the pre-schools to have enough space

in their environment and have playing equipment because it promotes child motor development. Older children will climb, jump, run, and do other things which make younger ones to imitate and learn in the process. It is from a well-developed child motor system that allow for success in later life events even in success in sports. Playfulness is strongly related to the development of the child's whole body, hand-eye co-ordination, and is important in building strength and endurance (Whitebread, Basilio, Kuvalja & Mohini, 2012). Whitebread and others (2012) also stated that even though seen as 'risky' in the modern environment, outdoor physical play supports children's independence, resourcefulness, and self-regulation development. In all aspects, play helps the child to learn to socialize with other children, regulate their emotions and behaviour. Play also enables the children to reason, develop attention, follow instructions, and cooperate with others. That is why a good play experience should be part of each child's growth.

In two adequate pre-schools, children are also taught time management by having daily routines that help them to stay organised. For example, in one of the adequate preschools, a notice is given to all parents that children who will arrive at school late will not be allowed in as the gate will gets closed to avoid disturbing other children. The parents who pick up children late are also made to pay a fee for delaying the teacher's departure from preschool environment. When the class is getting ready to start lessons, the children are put in queues and taken to the toilet to avoid going out when the lesson is in progress. The children are then taken back to class to have their daily routine of having story time, handwriting, spellings, colouring, pre-math, and alphabet. During break time the children were supervised in their eating encouraged to share and eat in a stipulated time to avoid wasting so much time. These daily routines are so strongly followed such that even with the presence of the researcher observing, the children and their teachers still followed them. This could be attributed to the fact that the classrooms have about 30 children with carers present. Meaning

each carer is responsible for about 15 children and the classroom is easy to manage. The indoor space is beautifully decorated with learning aids and themes that are attractive to the children. Such classrooms to play and peer interaction that contribute to language development and helping each other to learn more about literacy.

The average pre-schools operate almost at the level of the adequate pre-schools. Their processes are similar but are not equipped in physical structures and material resources needed for child wellbeing while in school. Children can go to the toilet at their own request without, they have their meals in their less crowded classrooms and play within the classrooms because of not having outdoor play equipment. These children have a stipulated break time which they follow, and their classrooms are not overcrowded. The children are easily managed but with the presence of the observer, the children could not concentrate in their learning and the teachers did not seem to follow a well-organized daily routine that children were aware of. The interactions between the teachers and the children were so rich. The researcher also had an opportunity to observe the indoor play time where the children danced and sang with their teachers. It can therefore be stated that some teachers are not fully equipped with knowledge on how to manage negative child behaviours in presence of observer because. In the adequate schools, the children managed to learn and pay attention to the lessons without being distracted by the observer.

The inadequate pre-schools had small and overcrowded classrooms of about 40 children to 1 teacher. During the entire observations, the teachers could not follow their daily routine which they reported to have had. The children were making so much noise, running up and down with the teacher not being in control. The children seemed to be so excited but not in an orderly manner since they could not be made to sit and concentrate on learning. In one of these two pre-schools the children's focus totally shifted to the observer and they kept dancing and entertaining the observer. The teacher at times was not present as she was busy

with the other classes due to having less teachers compared to number of grades in the school. In the observer also found it difficult to enter these classes and even manage to sit because of the small space. At times when the teacher was present, she had but little control over the behaviour of the children. The Ministry of Education, Science, Vocational Training and Early Education (2014) stated that "Inadequate educational infrastructure at all levels, a shortage of teaching and learning materials and appropriately qualified teachers, and a general absence of investments in education the sector" are part of governments challenge to reach the "Education For All" goal. This study is evidence that poor infrastructure, teacher qualifications, environments and teaching materials is a problem that needs to be addressed in both the private and government preschools.

It is important to have well-built pre-school structures with good ventilation, enough space for children to move around freely and not have accidents. The structures with toilets at least in a ratio of 1 toilet to 15 children. Running tap water and soap for hand washing after using the toilet. The environments should be attractive and organised in a way that stimulate the child cognitively, socially, and physically. Iruka, Mount-Cors, Odom, Naoom & Van Dyke, (2012) found instances where floors had large holes, the steps to enter and leave the classroom were dangerously high and furnishing and play parks were too damaged and not safe for use. They also found that these preschools lacked procedures for washing hands after using the latrine or before eating which is the case for the inadequate preschools that had neither running water nor soap for washing hands after toilet use. They also found instances where room arrangements created some danger for teachers and children such as the use of one desk to store all materials and the placing of charts too high so the teacher will need to lift every student to allow children to point to the chart with a pointer. Due to less space, an assumption that children attending inadequate preschools may be prone to illnesses such as

flu, colds, and other airborne diseases can be made. This can result from poor classroom ventilation, overcrowding and allowing children with signs of flu to attend classes.

The overcrowded classrooms in the inadequate schools had children who were too excited and not easy to manage by the class teachers. According to Iruka, Mount-Cors, Odom, Naoom & Van Dyke, (2012), large class sizes may hinder teachers' ability to meet each child's need and class size may have impacts on the availability of classroom materials and resources. In large group sizes of about 30 children per teacher, it is not possible for teachers and carers to interact effectively with all the children in class (Boo, Araujo & Tomé, 2016). Therefore, children in overcrowded classes may delay developing language and other cognitive skills compared to children their age who are in small group size classes. Papers with labelled pictures of things in the child's environment such as; animals, actions, things used at home, school, hospital and so many more are displayed in the children's classrooms but without effective interactions between teachers and children it may not contribute fully to child's positive development. Large group sizes with less teacher pay can lead the teacher to lose interest and not teach the children well as expected.

Iruka, Mount-Cors, Odom, Naoom & Van Dyke, (2012), also stated that there is a need to consider the maximum number of children a teacher can reasonably accommodate and educate, especially in light of the lack of support and monetary compensation. These children who are about 30 in one class with 1 teacher cannot be easily managed and taught especially when the teacher is not motivated with a good salary and other allowances. Activities such as sounds, letter naming and pre-math are a cognitive task that need attention and time from the teacher. Even after all the preparations for the lesson because of a large group size, the teacher may fail to deliver the lesson in accordingly. A child needs to be guided properly with time to know the relationship between the written letter and its sound. One of the observed results from the current study was that children from inadequate care

centres would sing the sounds or the ABC song without knowing which letter stands for which sound. Some children would just mention the sounds because their teacher has taught them before but without knowing that K is not W. The current study did not plan to record child verbal responses on letter naming task and therefore did not have any voice records, however, it was observed by the researcher that children from inadequate care preschools did not answer with confidence like the children from adequate care preschools who answered fast and correctly. Those from inadequate care centres answered with doubt and in most instances responding with a different incorrect letter or sound. Most children from the adequate pre-schools on the other hand would mention the letter and say its sound. These also knew how to write their names unlike most children from inadequate pre-school who would say the sounds but fail to mention the letters or write down their names. However, all the teachers from the six pre-schools stated that the children's curriculum changed and that children currently learn the alphabet by knowing the sounds of the letters and not the actual letters. Hence this can be the reason why some children failed the letter naming task. In addition, if the teacher is not motivated well, they may be stressed with other things hence disrupting their concentration as they interact with the children.

In addition, the overall results indicate that from a total average of 18.4 Daily Experiences scores; adequate pre-school scored 17 and 16, average pre-schools scored 14.4 and 12.2, while inadequate pre-schools scored 11.6 and 9.

5.2 QUALITY CARE AND DEVELOPMENTAL OUTCOMES

To assess quality care; teacher qualifications, teacher salaries, indoor and outdoor space, group size and child-carer ratio where considered. Teacher qualifications included pre-service and continuous staff development trainings of about 15 hours in the past one year.

This study found that from a total of 65 carers in the assessed pre-schools, a large percentage were less qualified. Most of them are only grade 12 school leavers and are employed as helpers to the main teacher or as teachers. The percentage of unqualified teachers and teachers with certificates was 29% and 29% respectively. Only 3% had a degree as their qualifications and these degrees are in primary and secondary teaching. Only 39% from the total of 65 teachers had a diploma qualification in early childhood education.

Qualified teachers according to the Ministry of Community Development, Mother and Child Health document on Zambian minimum standards of care for children, re required to be holders of a Grade 12 school certificate or above and have satisfactorily completed a career certificate or vocational training programme in the provision of child care. However, the Government tried to phase out certificates and introduced Degree and Phd programs offered at Chalimbana University and Zambia open University (Policy Monitoring and Research Centre, 2017).

With these qualifications, the teachers should also have undergone pre-service training in developmental stages of children, age-appropriate activities, positive guidance, and discipline of children, fostering children's attachment, identity and self-esteem and helping children overcome separation and loss of their parents. In addition the teachers should have pre-service training in health and safety practices in the care of children, positive interaction with children, supervision of children and prevention of child sexual abuse, detection and reporting of suspected child abuse and neglect, psycho-social counselling on HIV, as well as basic facility management.

The pre-school management should see to it that the teachers are provided in-service training of about 15 hours in child development, care of children with special needs, adult and child health, nutrition, safety and risk management, curriculum planning, identification

and care of ill children, recognition of child abuse, neglect and sexual abuse and reporting responsibilities, cultural diversity and gender awareness, professional development, such as communication, time management, and stress management annually. The reported results in (figure:4) of areas in which these teachers have continuous professional development is poor for the two inadequate care pre-schools. From observations, the respondents showed that they had no record and were just guessing to not completely report a "no record" of continuous staff development programs in their centres. This means these teachers are only using the knowledge acquired during their pre-service training and are not up to date with new knowledge on ECE. The Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) (2014), continuous professional development programmes for teachers as well as leadership development should be the central theme in the general delivery of education.

This study therefore is in line with MESVTEE (2014) and the argument is that without continuous professional development programs the teachers in these assessed preschools are not appropriately qualified. The teachers in the two inadequate preschools do not undergo any in-service training to refresh their minds and to acquire new knowledge that come with the changing world. The two adequate preschools reported undergoing at least in-service training in a specific area of child development at least every time the school is on break. Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, and Yazejian (2001), also argued that preschool teachers also need to be educated because they are more than babysitters. Hence, they need to know how to use provided materials and resources to shape the development of the children they interact with because good quality requires more training than mandated by licensing body.

As stated by Shonkoff and Philips (2000), teacher qualifications can help us to understand teacher salary dynamics in preschools. With less qualifications comes a small salary which

cannot fully sustain one's life and may in fact contribute to teachers' financial stress. The preschool proprietors go for less qualified teachers that can be described as cheap labour. In any school environment qualifications will always determine how allowances are rewarded. From the assessed preschools, it is evident that most teachers are less qualified hence paying them an amount ranging from k500 to K1500. These are private schools where the teachers are paid a monthly allowance of K500 which is not even enough for rentals and home upkeep. The qualifications can then be the reason why these pre-schools offer so little to their teachers who teach a class of about thirty children. It can, therefore, be assumed that staff numbers and teacher salaries are determined by teacher qualifications and enrolment numbers. Hence, class size should at least be taken into consideration in determining teacher salaries.

Therefore, the preschools in which teachers are paid a higher amount of money were of adequate care because teachers will try to work hard and last long on the job. The preschools with less pay for the teachers were of moderate and inadequate care. This is because teachers may not stay long, and children may be taught by different teachers in a period of one year which brings inconsistence in teaching methods. In one of the 9 preschools, teachers for all the grades were found having a meeting and complaining that, *"our salary is too small, compared to the tuition fees that children in our classes pay. Our salary does not even equal to one child's tuition fees".* They complained that the tuition fee for one child is even more than the salary that one teacher receives. This seemed to have upset them so much and they complained that the owner of the school gets more money just from one class of children but does not want to increase their salaries and improve their conditions of service. This shows that the teachers are not happy, and the less pay is not motivation enough for them to teach accordingly because the salary is not even enough for house rentals and upkeep.

The minimum standard of care document for young children in Zambia states that the child-teacher ratio should be at least a minimum of 8:1 or a maximum of 15:1. However, from the total of 6 preschools where child participants were sampled, at least the adequate preschools reported that they have a number of teachers and carers 10 and above 10 where each teacher cares for about 15 children. Four pre-school centres at the time of data collection had a few carers less than 10 but with high numbers of children enrolled in the preschool. From the observed and assessed 6 Pre-school centres; two had child-carer ratio of 8-1, 3 had a child-carer ratio of 20-1 and one preschool had a child carer-ratio of about 25 and above children per carer.

Adequate preschools have an estimated indoor space of 2x2m per square for each child and an outdoor space of about 2x3m per square for each child with well fitted swings, slides, and other playing equipment. Average preschools have small spaces indoors making a classroom to be small for indoor activities. They have large outdoor space but without play equipment. While inadequate preschool has very overcrowded indoor space and less outdoor space where it is impossible to meet the 2x2m per square for each child and still have less than 2x3m per square of outdoor space for each child.

Mitchell, Wylie and Carr (2008), stated that consistent evidence from a large body of international and New Zealand evidence found that ECE participation is positively associated with gains in mathematics and literacy, school achievement, intelligence tests, and also school readiness, reduced grade retention, and reduced special education placement. However, in the Canadian council on learning report (2006) it is clearly stated that only children experiencing high-quality care have higher scores on achievement and language tests, show better social skills and fewer behavioural problems than children experiencing low-quality care. In addition, high-quality programs have long-term positive effects on children's development and that high-quality care programs that provide environments rich in

spoken and written language experiences promote children's literacy and language development (Habib, 2005). With a poor child-teacher ratio, the interactions between the teacher in Zambian pre-schools and some children may not be of good quality hence interactions that do not contribute to positive development outcomes in children.

In one of the pre-schools, it was discovered that there was a child with special needs who was incorporated in a class for children without special needs. This child who is special and differently abled is being expected to perform as good as the rest of the class. This child was described by the teacher as having a mental disorder even when the teacher was not knowledgeable about the child's condition. This child is therefore lagging behind all the other children in class yet the parents and the teacher seem to overlook the importance of taking the child to a school that will meet her learning needs or come up with a unique learning program just for her which can be offered in addition to the lessons being taught to the rest of the children. Even though the teacher said the child has improved greatly in her social-emotional, and attention skills, the child still lags extremely far behind children of her age in writing and other cognitive skills such as speech. Even with just one child recorded in the current study, it can be predicted that so many children with special needs and without proper diagnosis are being enrolled in pre-schools that are offering care which is not meeting their special needs.

In addition, the significant differences observed in the receptive language skills and later naming scores of children from adequate and inadequate care preschools maybe partly because of different care they receive in preschools and their daily experiences. The teacher qualifications and training of teachers as it equips them with current knowledge about child development

REFERENCES

Arlington., V.A. (1992). *How early experiences affect brain development. The ounce of prevention zero to three, head start: the emotional foundations of school readiness 2nd Ed*.

Bergmann., R. B. & Helburn., S. W. (2002). *America's childcare problem: The way out.* Palgrave for St. Martin's Press.

Boo., R. F., Araujo, M. C. & Tomé, R. (2016). How is Child Care Quality Measured? Retrieved from internet on 15.07.2017.

Brennan., D. (1998). *The politics of Australian childcare: Philanthropy to feminism and beyond*. Cambridge university press.

Britto, P. R., Yoshikawa, H. & Boller, K. (2011). A conceptual framework: Measuring quality and using it to improve practice and policy in early childhood development. Adapted from Quality of early childhood development programs in global contexts', (2011) by the Society for Research in Child Development (srdc) in their quarterly Social Policy Report.

Bronfenbrenner., U. (1986). Ecology of the family as a context for human development: Research Perspectives. *Journal of Developmental Psychology Vol. 22, No. 6,723-742.*

Cahan., E. D (1989*). Past Caring: A history of the U. S Preschool Care and Education for the Poor, 1820-1965.* Colombia University.

Canadian Council on Learning (2006). Why is high-quality childcare essential? The link between quality childcare and early learning. Retrieved from internet on 03.07.2018

Education for All (2015). National Review Report: Zambia. efa2015reviews@unesco.org

Goldstein., J. (2003). *Contributions of play and toys to child development*. Brussels.

Grantham-McGregor, S., Cheung, Y. B., Cueto, S., Glewwe, P., Richter, L., Strupp, B., & the International Child Development Steering Group. (2007). Child development in developing countries: Developmental potential in the first 5 years for children in developing countries. *Lancet; Centre for International Child Health, Institute of Child Health, 369: 60–70.*

Habib., A. M. (2005). Early Childhood education in Sudan. Iowa State University

Hamusunga., G. (2012). An analysis of the performance of the Zambian education system. Zambia National Education Coalition (BA thesis, The University of Zambia) The University of Zambia Research Repository.

Haßler, B., Hennessy, S., Cross, A., Chileshe, E., & Machiko, B. (2014). School-based professional development in a developing context: Lessons learnt from a case study in Zambia. Centre for Commonwealth Education, Faculty of Education, University of Cambridge, UK

IBM (2004). What is Family-Friendly Child Care and Why Does It Matter? What Parents and Providers Say and the Implications for Quality Care? A Parent's Guide to Family-Friendly Child Care Centres. Retrieved on 13/07/2016 from http://www.abcdependentcare.com

Iruka, I. U., Mount-Cors, M. F., Odom, S. L., Naoom, S. & Van Dyke., M. (2015). Development and Sustainability of High-Quality Early Childhood Education Programs in Zambia. *In Early Education in a Global Context*. *127-158.*

Kamerman., S. B. (2008). School readiness and international developments in Early Childhood Education and Care. *Encyclopedia on Early Childhood Development Centre of Excellence for Early Childhood Development*. Columbia University, USA (Online publication)

Kaneneka., P. (2013). *Assessment of the benefits of early childhood care, development and education provided by non-governmental organisations in rural areas: a case study of Chibombo Distrcit in central province of Zambia* (BA thesis, The University of Zambia). The University of Zambia Research Repository

Kreader, J. Lee., Ferguson, D. & Lawrence, S. (2005) Infant and Toddler Child Care Quality. Research-to-Policy Connections No. 2. *Child Care & Early Education Research Connections. Retrieved from internet on 26.08.2020*

Lombardi., J. (2003). *Time to care: Redesigning childcare to promote education, support families, and build communities*. Temple University press.

Marshall., N. L. (2004). The quality of early childcare and children's development. *Current directions in psychological science*

Mashburn, J. A., Pianta, R. C., Hamre, B. K., Downer, T. J., Barbarin, O. A., Bryant, D., Burchinal, M., Early, M. D., & Howes, C. (2008). Measures of Classroom Quality in Prekindergarten and Children's Development of Academic, Language, and Social Skills. *Child Development, May/June, Volume 79, Number 3, Pages 732–749.*

Masten, A. S., & Coatsworth, D. J. (1998). The Development of Competence in Favourable and Unfavourable Environments; Lessons from Research on Successful Children. *American Psychological Association, Vol. 53, No, 2, 205-220.*

Matafwali, B., Shallwan, S. & Sibanda, Z. (2012) The Zambia Child Assessment test (ZamCAT): Development and Use in Three African Countries. Retrieved from internet on 28.06.2016.

McQuillan, M. K. (2007). Early Childhood: A Guide to Early Childhood Program Development State of Connecticut State Board of Education.

Ministry of Community Development Mother and Child Health (2014). *Zambia Standard of Child Care Facilities, Regulations and Procedures. Retrieved from internet on 19 June 2018.*

Ministry of General Education (2015). Early Childhood Education National Policy, Zambia.

Ministry of General Education (2016). Strategic Plan 2016-2020, Zambia.

Mooya., H. (2009). *Child-Mother Interaction and Child secure base in Zambia*. The University of Zambia

Mwamwenda., T. S. (2014). Early Childhood Education in Africa. *Mediterranean Journal of Social Sciences Vol 5 No 20.*

Myers., R. G. (2006). In Search of Quality in Programmes of Early Childhood Care and Education (ECCE). A paper prepared for the 2005 EFA Global Monitoring Report.

National Institute for Early Education Research (2002). *Preschool Policy Matters; Issue 1 / November.*

Ndhlovu., J. (2016). Effective management of early childhood centres in government primary schools of Chavuma district in Northwesten Province-Zambia

Peisner-Feinberg, S. E., Burchinal, R. M., Clifford, M. C., Culkin, L. M., Howes, C., Kagan, S. L., & Yazejian, N. (2001). The Relation of Preschool Child-Care Quality to Children's Cognitive and Social Developmental Trajectories through Second Grade**.** *Child Development, September/October 2001, Volume 72, Number 5, Pages 1534–1553.*

Policy Monitoring and Research Centre (2017). The status of Early Childhood education Report in Zambia. Retrieved on 5 February 2020.

Ramey., C. T. & Ramey., S. L. (1999). Early Learning and School Readiness: Can Early Intervention Make a Difference? *Merrill-Palmer Quarterly, Volume 50, Number 4, Wayne State University Press*

Rose., E. (1999). *A Mother's Job: The History of Day Care1890–1960*. Oxford University Press.

Shikwesha., R. A. (2014). *Factors affecting the provision of early childhood education in government primary schools. a case of selected schools in kabompo District of North Eestern Province of Zambia.* The University of Zambia

Shonkoff., J. P. & Phillips., A. D. (2000). From Neurons to Neighbourhoods: The science of early childhood development. *National Research Council and Institute of Medicine* Washington, D.C, National Academy Press.

Strickland, D. S., & Riley-Ayers, S. (2006). Early Literacy: Policy and Practice in the Preschool Years. *Preschool Policy Brief National Institute for Early Education Research, April, Issue 10 Series*

Szanton., E.S. (1997). Creating child-centered programs for infants and toddlers. Children's Resource International, Inc.

The Status of Education in Zambia Report: A special focus on quality of education. Retrieved from the internet on 16 August 2018.

The Zambia Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) (2004).

Thomas, M. T., & Thomas, M. A. (2009). Early Childhood Care and Education in Zambia: An Integral Part of Educational Provision? *Current Issues in Comparative Education, Teachers College, Columbia University, Vol. 11: 6-14.*

UNESCO (2017). Education for Sustainable Development Goals: Learning Objectives. United Nations Educational, Scientific and Cultural Organization. Retrieved from internet on 26.08.2020

UNICEF (2006) Programming Experiences in early child development for every child health, education, equality, protection advance humanity.

UNICEF (2014) Zambia Annual Report

UNICEF (2019). Zambia Education Budget Brief. Retrieved from the internet on 05.02.2020 http://www.unicef.org/zambia

Vandell, D. L., & Wolfe, B. (2000). Childcare quality: Does it matter, and does it need to be improved? *Institute for Research on Child Poverty*. University of Wisconsin-Madison

Whitebread, D., Basilio, M. & Mohini, V. (2012). The Importance of Play. A report on the value of childrens play with a series of policy recommendations. University of Cambridge.

Wishard, A. G., Shivers, M. E., Howes, C., & Ritchie, S. (2013). Childcare program and teacher practices: Associations with quality and children's experiences. *Early Childhood Research Quarterly 18 (2003) 65–103*.

Zambia–United Nations Sustainable Development Partnership rk (2016-2021). Retrieved from internet on 19.06 2018

Zellman, G. L., & Perlman, M. (2008). Child-Care Quality Rating and Improvement Systems in Five Pioneer States: Implementation Issues and Lessons Learned. Retrieved on 20/05/2016 from www.rand.com

APPENDIX

ZamCat Scales of Child Development

Gender of child:

Day care centre name:

Age:

Date of Assessment:

1.0 RECEPTIVE TEST

Display a selected picture page and allow child to point at the right picture matching the word.

ITEM	WORD	CHILDS RESPONSE				ANSWER
Ppv1	Broken	1	2	3	4	
Ppv2	Yawning	1	2	3	4	
Ppv3	Tortoise	1	2	3	4	
Ppv4	Dressing	1	2	3	4	
Ppv5	Picking	1	2	3	4	
Ppv6	Pair	1	2	3	4	
Ppv7	Pulling	1	2	3	4	
Ppv8	drinking	1	2	3	4	
Ppv9	Empty	1	2	3	4	
Ppv10	Liquid	1	2	3	4	
Ppv11	Washing	1	2	3	4	
Ppv12	Terrified/Scared	1	2	3	4	
Ppv13	Sharing	1	2	3	4	
Ppv14	Bucket	1	2	3	4	
Ppv15	Tugging	1	2	3	4	
Ppv16	Full	1	2	3	4	
Ppp17	Caterpillar	1	2	3	4	
Ppv18	Arguing	1	2	3	4	
Ppv19	Branch	1	2	3	4	
Ppv20	Chain	1	2	3	4	
Ppv21	Goat	1	2	3	4	
Ppv22	Fighting	1	2	3	4	
Ppv23	Root	1	2	3	4	
Ppv24	Coming	1	2	3	4	
Ppv25	Hoeing/cultivating	1	2	3	4	
Ppv26	Printing	1	2	3	4	
Ppv27	Time	1	2	3	4	
Ppv28	Reading	1	2	3	4	
Ppv29	Leaking	1	2	3	4	

Ppv30	Injection	1	2	3	4	

1. EXPRESSIVE LANGUAGE TEST

EL1	0 nonresponsive 1 few words 2 one short sentence 3 multiple short sentences 4 several sentences, few mistakes 5 clearly and correctly	

2. PATTERN REASONING

Explain the pattern to the child and allow child to fill in the missing pattern

							Code
KP1	1A		3C	4D			
KP2	1A	2B		4D			
KP3	1A	2B	3C				
KP4	1A	2B	3C				
KP5	1A		3C	4D			
KP6	1A	2B	3C		5E	6F	
KP7		2B	3C	4D	5E	6F	
KP8	1A	2B		4D	5E	6F	
KP9	1A		3C	4D	5E	6F	
KP10	1A		3C	4D	5E	6F	
KP11	1A	2B	3C	4D	5E		
KP12	1A	2B		4D	5E	6f	
KP13	1A	2B	3C		5E	6F	
KP14	1A		3C	4D	5E	6F	
KP15	1A	2B	3C	4D	5E		
KP16		2B	3C	4D	5E	6F	
KP17	1A	2B	3C	4D		6F	
KP18	1A	2B		4D	5E	6F	

3. FINE MOTOR SCALE

Explain the activity to the child and allow child to complete activity in required time

Item	Score criteria	Childs response	Answer
FM1	Correctly copies 3 or more numbers	0 No 1 Yes	
FM2	Correctly copies 3 or more capital Letters	0 No 1 yes	
FM3	Copies triangle	0 No 1 Yes	
FM4	Holds the pencil correctly	0 No 1 Yes	
FM5	Strings the ten squares in 40 seconds	0 No 1 Yes	
FM6	Does the big buttons in 40 seconds		
FM7	Does the small buttons in 45 seconds	0 No 1 Yes	
FM8	Puts all 12 squares in cup in 35 seconds	0 No 1 Yes	
FM9	Puts all 20 beans in bottle in 35 seconds	0 No 1 Yes	
FM10	Picks up the beans using finger and thumb	0 No 1 Yes	

LETTER NAMING TASK Instructions: Randomly point out the letters and allow the child to answer by mentioning the letters and follow up using the letters sounds in two minutes because of the change in how letters are currently being taught

B V E F

J I Z Y

W X K A

O M P G

T H N D Q

S L U C

R

OBSERVATION CHECKLIST FOR THE DAY CARE QUALITY OF CARE AND DAILY EXPERIENCES OF CHILDREN IN ZAMBIA

Note: These are to be observed with consent from the administration of preschool after researcher introduces self.

Item#	yes	no	Coding
1. Is there stagnant water in the surrounding?			
2. Are there dangerous objects such as broken glass bottles, nails, laying around?			
3. Is there good ventilation and heat for all rooms?			
4. Is the rubbish bin well covered?			
5. Are playing equipment well placed and maintained?			
6. Does the centre have climbing apparatus such as swings and wheel-toys?			
7. Do they have materials such as sand, clay, crayons, paints, story and picture books, dolls, puzzles, and music?			
8. Is the cooking place inaccessible by children?			
9. Are all electric wires hidden from children's reach?			
10. Is there a tap of running water?			
11. Is there clean water provided for children to drink?			
12. Are there clean toilets?			
13. Is there a disinfectants provided for cleaning potties or toilet every after use by a child?			
14. Did any carer engage in free play with children?			
15. Were children supervised during eating time?			
16. Is there soap for washing hands after using the toilet or before eating?			
17. Is there enough and a quiet space for children to rest from when children are tired?			
18. Are there enough mattresses for resting on?			

19. Are beddings clean for children to use when resting?			
20. Are children given enough time for free play			
21. Do children know their primary care giver within the day care by name?			
22. Did the any carer encourage children to share food with others?			
23. Did the any carer encourage children to share toys with others?			
24. Were children encouraged to speak to each other?			
25. Were carers responsive to child vocalisation?			
26. Were carers sensitive to child expressions and behaviours?			
27. Was any carer too much intrusive during child free play?			
28. Did any carer express disapproval/ criticise child in a negative manner?			
29. Provide at least 2 x 3 square metres of indoor activity space, measured wall-to-wall on the inside, for each child in the centre.			
30. Provide at least 2 x 2 square metres of outdoor play space for each child using the outdoor area at any one time.			
31. Provide separate care rooms and outdoor play areas for children less than 18 months of age, except in child care facilities where 12 or fewer children are receiving care.			
32. Where children under the age of five (5) years are using outdoor play areas, ensure the areas are enclosed by a fence of at least two metres.			
33. Did any carer use corporal or physical punishment on a child?			
34. Did any carer yell, shout, shame, make derogatory			

remarks about a child or a child's family, use language that threatens, humiliates, or frightens a child?			

Daily Experiences and Quality of Care Questionnaire

This is a questionnaire on learning contexts of young children in Zambia, it assesses the quality of care and daily experiences of children in their day care centres. It has to be filled in by the director/ care centre principle.

DERMOGRAPHICS

1. Name of child care centre: ……..

2. Filled in by (Name): ……

3. Date: …….

4. For how long has your child care centre existed? ……Years

5. How many children attend your day care centre? ……

6. What age range does your centre cater for? Tick appropriate age range

0-2	0-3	0-4	0-5

7. When was the last time you had a visitation from the social welfare inspectors? Tick right visitation time

Less than a month ago	
Six months ago	
One year ago	
We have never been visited	

DAILY EXPERIENCES AND QUALITY OF CARE QUESTIONS (Tick appropriate answers and kindly follow given instructions)

Item#	Answers	
	Yes	No
8. Are you licensed?		
9. Are you regulated?		
10. If yes to (Q 9), by which institution?..…		
11. Are you insured (for accidents, etc)?		
12. If yes to (Q11), on which insurance plan?		
13. Is there a registration fee?		
14. If yes to (Q13), how much is it?		
15. Do you have a first aid kit?		
16. Have you had any special childcare, early education or other related training?		
17. Are you a member of any professional association?		
18. If yes to (Q 17), Indicate which Association		
19. In the past 12 months, have you received 10 or more hours of additional child-related training		
20. Do you provide transportation services to pick up children to and from school or bus stop?		
21. Are your drivers licenced?		
22. Do your drivers have a Police Clearance Certificate? 23. Is there a carer provided to watch over the children during transportation apart from the driver?		
24. Does your program have any special features such as a day when teachers interact with parents?		
25. If child is mildly ill, such as with a		

cold or low fever, can child still come to this centre?		
26. Do you provide food to children for free?		
27. Do you provide food at a cost?		

28. What is the language of instruction in your school? ……

	K500-K2000	**K3000-K9000**	**Above K10,000**
29. How much are tuition fees?			
	K500-K1000	**K1500-K2000**	**K2000-K5000**
30. What are the salary scales for your employees?			

31. How many hours per day does a child receive care at this centre? ……

	06:30hrs	**07:30hrs**	**08:30hrs**
32. What time does the centre start operating?			
33. What time do you start caring for children?			
34. What time can parents drop off their children			
	12hrs	**14hrs**	**16hrs**
35. What time can parents pick up their children?			
	Less than 10	**10**	**Above 10**
36. How many members of staff do you have?			
	8-1	**20-1**	**25-1**
37. What is the child-teacher ratio?			

38. How many carers have attained the following qualifications?

Certificate in early childhood education	
Diploma in early childhood education	
Degree in early childhood education	
Carers who are only passionate but without any qualification	

39. What is your highest level of education? ……..
40. What is your staff turnover rate? Tick one that describes your staff turnover rate

10%	
20%	
Above 50%	

	Never	Sometimes	Most times	All times
41. Do your employees supervise child free play?				
42. Do you/employees speak to children during child free play?				
43. How often do you speak directly with parents about activities their child did during the day, such as eating or resting?				
44. Is it allowed for an individual other than the parents or guardians to pick up a child?				
45. How often do you speak with parents about how their child is performing more generally, or about any special concerns you have about child?				
46. How often do parents talk to you about their child or about special concerns or issues their child has?				
47. How often do parents participate in activities or outings with you and child?				
48. How often do you provide advice or emotional support to parents?				
49. Do you experience eating problems among children?				
50. Do children go back home with their parked food in bag packs?				

51. What major behavioural issue have you experienced in the past year? Tick only one that apply as major behavioural issue experienced

Aggression	
Insulting	
Vandalism	
Crying/disturbing class	

52. How was the issue handled? ……..

53. How do you handle other behavioural issues? Tick all that apply

Spanking	
Talking to child	
Calling parents	
Making child to recite something	

Isolating Child/ time out	
Making child to apologise	

54. What types of activities do you do with the children over a typical day/week?

Learning (alphabet, colors, nature	
Counting	
Drawing	
Building With (Blocks, Sand, clay and water)	
Sleeping time	
Story time	

55. What type of foods do parents pack most for children on daily basis? Tick all most common packed food

Fruits/vegetables	
Fried	
Biscuits	
Drinks	
Water	
Boiled	

56. Which foods do children prefer to eat?

Fruits/vegetables	
Fried	
Biscuits	
Drinks	
Water	
Boiled	

57. How many of your staff have had pre service training in the following? Only indicate the number of staff trained in each area.

Area of expertise	**Number of staff**	**Coding**
Developmental stages of children		
Age-appropriate activities		
Positive guidance and discipline of children		
Fostering children's attachment, identity and self-esteem		
Helping children overcome separation and loss of their		

parents		
Positive interaction with children		
Supervision of children and prevention of child sexual abuse		
Detection and reporting of suspected child abuse and neglect		
Psycho-social counselling on HIV		
Basic facility management		

58. Have your carers undergone child care training in the areas for at least 15 hours during the past one year?

	Yes (Number)	**No (Number)**
Child development		
Care of children with special needs		
Adult and child health		
Nutrition		
Safety and risk management		
Curriculum planning		
Identification and care of ill children		
Recognition of child abuse, neglect and sexual abuse and reporting responsibilities		
Cultural diversity And Gender Awareness		
Professional development, such as communication, time management, and stress management.		

59. Which meals do you serve? (Tick all that apply)

Breakfast	
Lunch	
Snacks	