

**A COMPARATIVE STUDY OF EARLY CHILDHOOD EDUCATION IN
SELECTED PUBLIC AND PRIVATE PRE-SCHOOLS IN KUMASI.**

By

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Philosophy in Art Education and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

A strong provision of pre-school education with children experiencing the same or similar training has the potency of ensuring the achievement of universal primary education for all children. This research adopted the qualitative research method to study and compare pre-school provision in public and private schools with a focus on Ayigya MA and the KNUST Nursery schools as a case study. The two schools are paradigmatic examples of typical public and private pre-schools in Kumasi because they are virtually located in the same administrative district. Primarily, the research compared curriculum and experiences provided the children in Kindergarten One within the two schools and the social and cognitive impact this makes to prepare the children for Kindergarten Two and subsequently primary school.

The purposive sampling method was adopted for the study. Data gathered revealed that pupils who were able to write the full set of the 26 English alphabets in the written test conducted constituted 8% in Ayigya MA School as against 40% in KNUST Nursery School. 25% of pupils in Ayigya MA School were however able to write numbers 1 to 10 sequentially as against 44% in KNUST Nursery School. Irrespective of the scores attained, some children from both nursery schools exhibited writing challenges which is typical of children at that age and who have only began to write.

Data collected and analyzed concluded that there was significant disparity in the experiences of the children, teacher expertise and experience, academic and play facilities coupled with differences in the social and economic backgrounds of children from Ayigya MA and KNUST Nursery schools. However, the findings suggest that children in both schools exhibited relatively different cognitive and

social competencies in varied percentages. It is recommended that further research be conducted in other pre-schools to verify the findings of this research.

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ABBREVIATIONS

BSID:	Bayley Scales of Infant Development
CEECIS:	Central and Eastern European Countries and the Commonwealth of Independent States.
CD:	Compact Disc
COL:	Commonwealth of Learning
DAP:	Developmentally Appropriate Practice
DCAP:	Developmentally and Culturally Appropriate Practice
ECCE:	Early Child Care and Education
ECD:	Early Child Development
ECEC:	Early Childhood Education and Care
ECLS-K:	Early Childhood Longitudinal Study-Kindergarten
EMIS:	Education Management Information System
GES:	Ghana Education Service
GPE:	Global Partnership for Education
IECD:	International Economic Development Council
KG:	Kindergarten
KNUST:	Kwame Nkrumah University of Science and Technology
MA:	Municipal Assembly
MDG:	Millennium Development Goal
MOE:	Ministry of Education
NAEYC:	National Association for the Education of Young Children
NICHD:	National Institute of Child Health and Human Development
OECD:	Organization for Economic Co-operation and Development
PE:	Physical Education
UIS:	UNESCO Institute for Statistics

UN: United Nations

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNICEF: United Nations Children's Fund

ZPD: Zone of Proximal Development

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CHAPTER ONE

INTRODUCTION

1.1 Overview

Chapter one provides a background to the study, statement of the problem that necessitated the research, the main objectives and research questions on which the research thrived. The chapter further captures the delimitation; limitations encountered through the study, definition of terms, importance of the study and finally provides how the rest of the chapters of the dissertation are organized.

1.2 Background of the Study

Undoubtedly, early childhood education has the potency of affecting the future of any nation by serving as a foundation upon which all other educational levels rest thereby nurturing children with skills, attitudes and competences necessary for individual and national development. Early childhood care and education in recent times has been formalized by most countries thereby allowing private and public investment in helping children to optimize their potentials to augment care from family with systematic social, physical, cognitive, and emotional child development (Bar-On, 2004).

In 2010, the United Nations (UN) set its member nations the achievement of set goals that will enhance the life of all humans especially the very poor. With the achievement of universal education set as a goal, the UN will ensure that by 2015, children everywhere will be able to complete a full course of primary schooling. The provision of the same or similar pre-school education for all children therefore becomes a prerequisite in the achievement of the goal. This is because pre-school forms the foundation upon which all the other educational levels rest, contributing to

the overall success of training and nurturing the children with skills and attitudes that prepare them for formal education.

An empirical study conducted by the World Bank in Brazil revealed the impact of pre-school education in making children effectively school ready for primary education as well as yielding economic benefits through pre-school education as a policy intervention in redressing developmental distortions. The study indicates that early childhood education serves as a social and economic policy intervention especially for improving the status of the poor. It is a preparatory stage of making children school ready with fundamental skills, competencies and dispositions that ensure higher school enrollment, less class repetition, fewer dropouts and an increased participation of females in the work force of countries.

In order to train children with equal or similar early childhood education to meet the MDG 2 and for holistic national development, it is imperative that public and private pre-schools provide the same or similar experiences and opportunities for all children to fully explore their potentials. Accordingly, children everywhere in Ghana will be resourced with equal or similar experiences irrespective of their social, economic, ethnic or political backgrounds. Differences in children's early childhood experiences play a formative role in shaping school readiness and largely explain the skill gaps at school entry (Magnuson, Meyers, Ruhm & Waldfogel, 2004).

1.3 Statement of the Problem

Early Childhood Education must support children to develop the ability to work up and communicate their own impressions through creative processes with various forms of expression. The Ghanaian Pre-school curriculum is very flexible in terms of lesson content coupled with the absence of external examinations to assess pre-schoolers' eligibility for primary school education. Assessment of pre-schoolers

is done informally by adopting techniques such as observation, conversation, gallery works (where children go round to appreciate each other's work). This therefore provides freedom for both public and private providers of pre-school education to operate their own curriculum based on different philosophies and methodologies which create disparities in the knowledge and skill levels of pre-schoolers in Ghana, which may negatively affect the child's interest in formal education especially at the primary school level. There also exist differences in the quality of facilities in terms of physical infrastructure, teaching and learning aids and teacher expertise among private and public early childhood educational centres. As Magnuson et al. (2004) explain, differences in the provision of children's early childhood experiences largely explain the skill gaps at school entry.

Magnuson et al. (2004) assert that disparities in quality and design across programmes make it difficult to tease out effects for specific types of programmes and to generalize from one study to another. This research therefore aimed at studying educational provision in pre-schools in Ghana as a means of identifying and documenting any disparities between them with regards to curriculum, teaching and learning materials, facilities and teacher expertise using one public and one private pre-school each in the Oforikrom sub-metro district of Kumasi.

1.4 Objectives

1. To identify and describe the curriculum used in the selected pre-schools in Kumasi.
2. To identify academic resources available and how teachers use them to teach lessons.
3. To assess the cognitive and social impact of pre-school education on children's readiness for Primary One entry.

1.5 Research Questions

1. What curriculum is used in public and private pre-schools in Kumasi?
2. What academic resources are available in the pre-schools and how are they used to teach?
3. What is the cognitive and social impact of pre-school education on children's readiness for Primary One entry?

1.6 Delimitation

The research by content is limited to the scope and delivery of the Pre-school curriculum used in educating children in Ayigya MA and KNUST Nursery Schools; available resources in the schools; and other factors that directly or indirectly affect the education of pre-schoolers in public and private schools. Geographically, the research is limited to the two pre-schools within the Oforikrom Sub-Metro district of the Ghana Education Service within the Kumasi Metropolis.

The Oforikrom district makes a paradigmatic case for studying inequalities in the provision of early childhood education because it has a good number of public and private pre-schools. Research findings could therefore expose the general state of public and private pre-schools in the Kumasi Metropolitan area and how each one impacts on school readiness of the pupils.

The study is by period and duration limited to Pre-school education in the 2011 and 2012 academic years but does not include all children in KG1 in the two schools selected for the study. Although access to health care, adequate nutrition and the quality of pre-school services are essential to an effective early childhood development, these critical areas were not included in this study.

1.7 Limitations

The research did not include all pre-schools in the Oforikrom sub-metro due to financial and time constraints. Another limitation was the inability to study all the KG1 classes in the selected schools. In Ayigya MA Nursery, only 12 pupils who could write undertook the Pre-test. Although challenges were encountered, data collected was not limited in authenticity or quality because due process was followed to arrive at the findings and the pre-schools selected represent the nature of pre-schools existing within the Oforikrom Sub-metro district of Kumasi.

1.8 Definition of Terms

Basic Education: The minimum period of schooling needed to ensure that children acquire basic literacy, numeracy and problem solving skills as well as skills for creativity and healthy living. In Ghana, this consists of two years of Nursery, six years of Primary and three years of Junior High School education.

Early Childhood Development: It includes services designed for the physical and intellectual growth of children between ages 0 and 6 years.

Early Childhood Education and Care: They are services for children under four years and involve elements of both physical care and education. Services provided incorporate day care, pre-school, home visits by trained professionals, health and nutrition services, and parental education.

Curriculum: A composite of anticipated and unanticipated experiences, outputs and outcomes possible within a learning institution which focuses on the learner, the teacher, teaching and learning methodologies.

Pre-school: Also known as Infant education, it is the provision of education for children before the commencement of statutory and obligatory formal education, usually between the ages of zero and three to five years, depending on the jurisdiction.

Nursery: A school for children between the ages of one and five years, staffed by suitably qualified and other professionals who encourage and supervise educational play rather than simply providing childcare.

Crèche/ Day Care: A facility where children are cared for by a person other than the child's legal guardians.

Kindergarten: A programme or class for four to six year old children that serves as an introduction to school.

Public school: An educational facility (school) that is government operated, funded or subsidized.

Private school: An educational facility (school) that is privately owned, operated and is fee-paying.

1.9 Importance of the study

A research gap exists between the state and nature of public and private pre-schools in Ghana. Because pre-school education has the potency to provide a strong weapon against illiteracy and poverty by building human capital through early interest in education, substantial research knowledge and data is needed to inform policy makers and providers of education about the differences that may exist in pre-school education, their causes and possible remedies.

1. The research project serves as reference material for academia and other research institutions engaged in the research and or business of early childhood education and development.

2. The research work provides a basis for stakeholders in the achievement of the UN Millennium Development Goal 2 for universal primary education, a reflection of foundational Pre-school disparities or challenges that could affect the attainment of this development goal.
3. The research reveals the true state of existing methods of teaching and learning, nature of pupils, teaching and learning materials, anticipated and unanticipated experiences arising from the curriculum adopted by the selected pre-schools.
4. Teachers and support staff who were participants of the research work have information that could help them to reassess their teaching styles to the benefit of their pupils while making conscious efforts at maximizing the benefits to be derived from the use of appropriate teaching and learning materials and techniques.

1.10 Organization of the rest of text

The thesis is organized in five chapters. Chapter two is a review of related literature covering both theoretical and empirical aspects of the research focus. The methodology adopted covers chapter three involving research design, library research, population of the study, sampling, data collection instruments adopted. It also embodies the types of data, administration of instruments, data collection procedures and data analysis plan used by the researcher. Chapter four deals with presentation and discussion of findings from data collected under the study. The research concludes with a summary, conclusions and recommendations to be implemented of all the chapters in chapter five.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Overview

The review of related literature covers children's development, theories underpinning early childhood education, classification of early childhood and care, and early childhood theories. Other reviewed topics include Pre-school curriculum issues, and challenges facing Pre-school education.

2.2 Child development

The subject matter of child development has grown exponentially over the last fifty years such that its study has become a vast multidisciplinary enterprise (Hopkins, 2005). Bruner (2005) indicates that child development in the last quarter-century has been of general and politically passionate concern. Child development has therefore become central in broader societal discussions and policies. Some issues that are publically scrutinized are *when* and *how* 'education' should start even before a child ever gets to school; *what* should schools take as their objective, and *in what ways* might the larger social environment harm or help a child's readiness for later school learning?

The field of child development is multidisciplinary spanning across the domains (social and natural sciences) of developmental biology, psychology, neuroscience, sociology, medicine and philosophy. Theories from these specialized domains have shaped pedagogical philosophies and practices. This has therefore developed the holistic or whole child approach which stresses the importance of thinking about and behaving towards children as entire individuals with their varied skills and competencies working in tandem to support their development as a whole (Lindon, 2010).

Santrock (2005) as cited in Enti (2008), explains that the five periods in a child's development follows a sequence. There is the prenatal period, followed by infancy, next early childhood, then middle childhood and late childhood, and lastly adolescence. The prenatal period which is the first period is the time from conception to birth, whereas the infancy and toddlerhood which spans the period from birth to about three years of age is the second stage. This suggests that the study of child development can be tackled from any of these stages. This study however focuses on early childhood.

Wenger & Poe (1996) hold the view that by regulating nutrition, stimulation and other environmental factors, parents and teachers alike can intervene dramatically in children's intellectual growth. At the development stages of children, interventions and stimulations greatly enhance the intellectual growth and development. According to a study Wenger and Poe conducted at the Heinrich Heine University in Dusseldorf, Germany in 1995, significant modification of children's brains through training and conditioning improves intellectual growth. They indicate that brain growth to its peak occurs in three distinct spurts. The first growth period begins eight weeks after conception and continues until the thirteenth week. The second begins ten weeks before birth and continues until age two. The last growth period, which is the critical years of the child's development, occurs between conception and age five. This growth period presents an invaluable window of opportunity during which children can be properly prepared to give them an unparalleled early advantage.

Although early childhood education has existed since the creation of kindergartens in the 1800s, ... and that tremendous amount of attention has been devoted to the subject of early education for young children (Bredekamp, Knuth,

Kunesh & Shulman, 1992), there still exists the need to collate literature in a comprehensive format to make clear the various theories and philosophies that underpin early childhood development as adopted by Pre-schools.

In the United States of America during the 1980s, stakeholders and organizations in the business of education made numerous calls for school reforms or recommendations for changes in teacher education, graduation requirements, school structure and accountability measures. According to Bredekamp, Knuth, Kunesh, and Shulman (1992), the National Association for the Education of Young Children (NAEYC) made influential statements defining developmentally appropriate practices for young children and specifically criticizing rote memorization, drill and practice on isolated academic skills, teacher lecture, and repetitive seatwork. The stress was on the need for greater emphasis on the following areas:

1. Active, hands on learning;
2. Conceptual learning that leads to understanding along with acquisition of basic skills, meaningful, relevant learning experiences;
3. Interactive teaching and cooperative learning; and,
4. A broad range of relevant content, integrated across traditional subject matter divisions.

2.3 Child Development Theories

Theories of child development provide insights into the cognitive, emotional, physical, social and educational growth that children go through until adulthood. The neuromaturational, constructivist, ethological, learning and psychoanalytical theories are amongst several theoretical approaches that have defined contemporary developmental science. Kohlberg and Mayer (1972) as cited in Bowman (1993) outline the major theoretical or philosophical positions in early childhood education,

using the terms romanticism (to describe an inner-directed, maturationist perspective), cultural transmission (to describe an outer-directed, behaviorist point of view), and progressivism (for a self-constructed, stage-determined Piagetian position).

Theories are generated from suppositions which are abstracts that have an explanatory function or a domain of application. Theories are mostly made up of a mix of principles and propositions that may either be true or false, allowing the development of models that may or may not fit the domain the theory addresses. The influence of educational thinkers such as Pestalozzi, Froebel and Maria Montessori and others have shaped pedagogical approaches to early childhood development.

Bredekamp et al.'s (1992) theoretical principles of child development and learning are critical in designing developmentally appropriate practice (DAP). Based on the works of Piaget, Vygotsky, Erickson and several others. They propose that children reach their best when their physical and psychological needs are met. They further allude to the fact that children learn through play and social interactions with both peers and adults in constructing their knowledge. They however, admit human development and learning as not definite but characterized by individual variation and the child's own interests and quest for knowledge. The foundations of educational practice of Bredekamp et al's theory and their explanations are illustrated in Table 2.1

Table 2.1 Theoretical Principles on DAP North Central Regional Educational Laboratory.

Principle	Practice
Children learn best when their physical needs are met and they feel psychologically safe and secure.	DAP respects children's biological needs. For example, children are not made to sit and attend to paperwork or listen to adult lectures for long periods of time. DAP calls for active play and periods of quiet, restful, activity. The environment is safe and secure where everyone is accepted.
Children construct knowledge.	Knowledge is constructed as a result of dynamic interactions between the individual and the physical and social environments. In a sense the child discovers knowledge through active experimentation. Central to experimentation is making "constructive errors" that are necessary to mental development. Children need to form their own hypotheses and keep trying them out through mental actions and physical manipulations - observing what happens, comparing their findings, asking questions, and discovering answers - and adjust the model or alter the mental structures to account for the new information.
Children learn through social interaction with other adults and other children.	A prime example is the parent-child relationship. The teacher encourages and fosters this relationship as well as relationships with peers and other adults by supporting the child in his or her efforts and later allowing the child to function independently. The teacher's role is one of supporting, guiding, and facilitating development and learning.
Children learn through play.	Play provides opportunities for exploration, experimentation, and manipulation that are essential for constructing knowledge and contributes to the development of representational thought. During play, children examine and refine their learning in light of the feedback they receive from the environment and other people. It is through play that children develop their imaginations and creativity. During the primary grades, children's play becomes more rule-oriented and promotes the development of autonomy and cooperation which contributes to social, emotional, and intellectual development.
Children's interests and "need to know" motivate learning.	Children have a need to make sense of their experiences. In a developmentally appropriate classroom, teachers identify what intrigues their children and then allow the students to solve problems together. Activities that are based on children's interests provide motivation for learning. This fosters a love of learning, curiosity, attention, and self-direction.
Human development and learning and are characterized by individual variation.	A wide range of individual variation is normal and to be expected. Each human being has an individual pattern and timing of growth development as well as individual styles of learning. Personal family experiences and cultural backgrounds also vary.

These Developmentally Appropriate Practices provides the foundation for teachers and caregivers to ensure effective teaching, understanding and familiarization with children's personal and cultural backgrounds in order to accurately assess their learning and developmental accomplishments (Bowman et al., 2000).

Overtime, the theoretical principles on DAP faced criticism because they assumed universal truths and laws about child development and learning and also ignored the influence of cultural, social and political influences and systems that are essential features of any particular community in any period of time (Cannella, 2005 as cited in Papatheodorou)

The major theories of child development fall under three major processes involved in children's development: biological processes in Freud's psychoanalytic and Lorenz's ethological theories, cognitive processes in Piaget's cognitive theory, Vygostky's social-cultural cognitive theory and information theory. (Santrock, 2005 as cited in Enti, 2008)

Piaget propounded four stages of development from early childhood through to adulthood as the sensorimotor stage, preoperational stage, concrete operations and formal operations and which were developed through his observation and conclusion concluded that children of an equivalent age make similar mistakes, ideas and mindset.

The sensorimotor stage of child development which is approximately between the ages zero to two (0-2) years is where infants gain their earliest understanding of the immediate world through their senses which are vital channels

of information and through their own actions, beginning with simple reflexes such as sucking and grasping. During the preoperational stage of development (appropriately between the ages of two to six (2-6), young children can use symbols for objects such as numbers to express quantity and words to represent real people and objects. After the preoperational stage, young children enter the concrete operations stage where school-age children can perform concrete mental operations with symbols using numbers to add or subtract and organize objects by their qualities such as size or colour.

Piaget's stages of development conclude with the formal operations stage where developing early adolescents are able to think and reason abstractly, to solve theoretical problems and answer hypothetical questions. His philosophy about child development as opposed to the educational belief over the first half of the 20th century that statement children are empty vessels that need to be filled up with adult given knowledge. Piaget's theory was that children are active participants in their own learning process and have the ability to construct their own knowledge and also further their own understanding.

Lev Vygotsky also propounded the cultural-historical theory which is the idea that child development is the result of the interactions between children and their social environment. Vygotsky continues that learning could lead development if it occurs within the child's Zone of Proximal Development (ZPD). The ZPD contains skills and concepts that are not yet fully developed but are on the edge of emergence which conforms to the developmentally appropriate practices prescribed by the NAEYC. These skills and concepts emerge only if the child is given appropriate support in terms of guidance and an environment that is conducive.

The Northern Ireland Council for the Curriculum Examinations and Assessment (1997) speculate that most young children:

1. Are interested in themselves and their environment. They are curious and like to explore, investigate and be creative. They have a sense of wonder and amazement;
2. Like to establish good relationships with adults and peers, and enjoy communicating with them. They are developing self-esteem and self-control. They often work in groups and some may show signs of leadership; sometimes they like to play alone;
3. Are developing concentration and a range of skills and competencies. They are learning to reason and solve problems and can, with the support and guidance of adults, further enhance their own learning;
4. Enjoy stories, rhymes and music;
5. Enjoy physical play and are becoming physically independent

Pre-schools in Australia are usually open only during school terms and most commonly during the hours of 9am to 3pm. Children attend on a half day or full day basis with each half-day equivalent to one session of pre-school (Press and Hayes, 2000). Pre-schools may also be referred to as kindergartens or pre-primary (OECD, 2000).

Woodhead (2007) professes that early childhood policies and practices are shaped by competing images and discourses of the young child. The four core perspectives that are most influential include:

1. A developmental perspective which emphasizes regularities in young children's physical and psychosocial growth during early childhood, as well as their dependencies and vulnerabilities during this formative, phase of their lives;

2. A political and economic perspective informed by developmental principles, translated into social and educational interventions, and underpinned by economic models of human capital.
3. A social and cultural perspective that draws attention to respects in which early childhood is a constructed status and to the diversities of ways it is understood and practiced, for, with and by young children, with implications for how goals, models and standards are defined, and by whom.
4. A human rights perspective that reframes conventional approaches to theory, research policy and practice in ways that fully respect young children's dignity, their entitlements and their capacities to contribute to their own development and to the development of services.

Because early childhood education is an offshoot of child development, most of the philosophies, theories and conventions adopted are as a result of the amalgamation of ideas from several areas of study such as psychology, sociology, neurology and pedagogy. This has resulted in numerous theories some of which are culturally specific to the child. Some of the theories propounded are as a result of critical observation of children and proven best practices in child training. These theories serve as foundational basis for the upbringing of children from infancy through to adolescence and then to adulthood.

Understanding the characteristics of children is therefore very important in having an insight into their thoughts and actions in order to deal with them. Children's (pre-schoolers') characteristics are however, relative to the factors within their cultural and immediate environment. This means that though there may be

notable universal characteristics, there are peculiar ones also unique to an individual child or group of children with the same background.

By definition, the care and education of children have varied greatly in terminology, content and references as a result of what experts note as a reflection of the struggle for a defined identity for the field of child education due to ideological, political and economic differences or even as a result of the key technical and financial partners who support early childhood care and education.

2.4 Early Childhood Education

Early years in the growth of children are critical for the physical and physiological development, the stimulation of intelligence, personality formation and the instillation of positive social behavior in children (Report of the President's Committee on Review of Education Reforms in Ghana, 2002). Early childhood is defined as the period from birth to eight years. It is a time of remarkable brain development where foundations are laid for subsequent learning (UNESCO, 2011). It also refers to any organized educational provision outside of the home for children in the age range of one to seven years. Other frequently used terms include pre-school, early years, kindergarten, playgroup, nursery, pre-grade one, preparatory year, 'zero year' etc. (International Bureau of Education, 2006).

According to the Regional Bureau for Education in Africa (BREDA), early childhood education refers to a holistic and integrated approach to health, nutrition, protection, and education needs and services (Regional Bureau for Education in Africa, 2010). The Working Group on Early Childhood Development which brings all the key stakeholders including international partners, governments, NGOs, experts and academics officially term early childhood education as Early Childhood Development (ECD)..

In Australia, Early Childhood Education and Care (ECEC) services for children below school age are usually referred to as either child care, children's services or early childhood services. ECEC therefore includes the range of formal care and education services for children under school age and in the early years of school. According to the World Bank (2001), early child development includes services designed for the physical and intellectual growth of children in their early years (ages 0-6). These services incorporate day care, pre-school, home visits by trained professionals, health and nutrition services, and parental education.

Bowman (2000) states that

Early childhood education does not refer to a single entity; rather, the term covers a variety of programmes for young children between birth and age 8. These programmes take place in children's own homes and in public schools, private pre-schools, and child-care homes and centers. Each of these settings may have quite different characteristics (adult/child ratios, group sizes, age ranges, cultural practices, and adult training and teaching styles) that in turn affect what and how children learn.

UNESCO (2007) indicates that the majority of children in early childhood education are between the ages of three and six years. In Ghana, pre-school education refers to the type of education given to children from ages 0 to five years, after which they enroll in the formal primary school (Report of the President's Committee on Review of Education Reforms in Ghana, 2002)

2.5 Classification of Early Childhood Education

The primary purpose of traditional pre-schools and nursery schools is to provide early education experiences to 3- and 4-year-olds. These programmes are often part-day and part-week, although with increasing numbers of parents working they are serving children for longer hours and providing wraparound (full-day) care (Magnuson et al, 2004). Early childhood education has been categorized at various levels usually using parameters such as the age and developmental growth of the child. In Ghana, Pre-school education falls under various levels namely crèche which is for children aged 0 to 2 years, Day Care (2 to 3 years), Nursery for 3 to 4 years and Kindergarten for children aged between 4 and 5 years (Report of the President's Committee on Review of Education Reforms in Ghana, 2002).

According to Melhuish (2005), Daycare refers to childcare by someone other than the parent and most research is concerned with the years 0–5. To Bowman (1993), Day-care programmes and half-day pre-schools have different philosophical and programmatic roots, and different factors have been stressed in research on these programmes. Daycare research, emanating from social welfare (principally medicine and social work) tends to be concerned with factors affecting the welfare of poor and vulnerable children and families. Nursery school or pre-school education, rooted in developmental psychology, is more often focused on social or emotional and cognitive development.

Aside formalized early childhood facilities, there are other informal child care programmes that children may receive prior to school entry. These include care provided by family child care providers, babysitters, or relatives. Informal child care is widely used for children under age three but it is still common for 3 and 4-year-olds as well (Magnuson, Meyers, Ruhm and Waldfogel, 2004). In most countries, schools may be classified under sources of funding and ownership, thus public

owned and funded schools, private but public funded schools (often religious schools) and private owned and funded schools (Dronkers & Robert, 2003) are all available.

2.6 Objective of Early Childhood Education

Enhancing the quality of young children's lives is now a national and international priority, expressed through research and policy initiatives, programme development and advocacy (Woodhead, 2006). Keely (2007) Papatheodorou (2008) quotes Nobel laureate James Heckman as saying early education gives individuals a head start and an advantage to both enjoy high earnings and to get into the pathway of lifelong learning. Papatheodorou (2008) reports that the OECD, UNICEF and UNESCO indicate that these findings and arguments have now become the cornerstone of international policies and commitments for the provision and expansion of early years care and education. Early child development yields high returns in physical, mental, and economic well-being during the life of the child and adult (World Bank, 2001).

According to UNESCO (2002), research studies of early childhood education support the importance of licensing and regulating services of providers, their qualifications and the commitment of providers in taking care of children and also learning about children's development and care. As noted by Magnuson et al. (2004), recent comprehensive reviews of experimental evaluations of high-quality early-childhood education programmes provided to children from at-risk groups conclude that these programmes improve children's short-term cognitive and language development and long-term academic achievement and reduce special education placement and grade retention

In an Carolina Abecedarian project with exceptionally low child-to-staff ratio and a curriculum focused on developing the language of children that by age 21 those in the Abecedarian programme were more likely to have gone on to college than those in the comparison group (Campbell, Ramey, Pungello, Sparling & Miller-Johnson, 2002 as cited in Magnuson et al., 2004). UNICEF (2007) as cited in UNESCO (2007) state that Pre-school can be particularly helpful for children from families and communities that have traditionally been excluded from education, and for those who only speak a minority language or whose home circumstances make it hard for them to benefit from early stimulation.

In the mid-1990s, the Government of Uruguay initiated a policy to achieve universal pre-primary education which was meant to increase the number of years of schooling without raising school leaving age and to ease children's insertion into and transition through the primary school system through the provision of basic foundations before the start of the primary cycle and socializing them (and their parents) to school from an early age. The government's policy in the long term was to reduce the incentive for early drop out and make the transition through the primary cycle speedier (Berlinski et al, 2007). In this instance, pre-school was used as an educational, social, economic and cultural intervention to make development both human and economic coherent.

Pre-schools established under the Ghana Education Service were to prepare children for primary school (International Bureau of Education, 2006). Pre-school prepares children with the requisite skills and competencies necessary for formal education. It provides parents with productive time for their work while their children are being cared for. Pre-school also provides children with a headstart advantage to formal schooling.

2.7 Access and attendance to Early Childhood Education and Care

The Early years of children are critical as it forms the bedrock for subsequent learning. This has made it imperative for investment in quality ECEC especially for the most disadvantaged in ensuring that children go to school at the right age, achieve better learning outcomes, stay longer in school and develop their full potential (Global Partnership for Education, 2012).

In Romania, according to UNESCO 2007, some elements of provision such as the provision of a free meal, books and learning materials and support with school transport makes positive contribution to enrolment and promotes access to early childhood education. In many cases, early childhood education is free of charge, particularly for the pre first grade preparatory or 'zero-year'. UNESCO further states that this is by no means general because in cases where fees are obligatory, arrangements are made to facilitate access for families on low income (social disadvantage) and or with disability.

2.8 Monitoring and Supervision of Pre-schools

Globally, early childhood education has had interest groups monitoring and providing supervisory direction to pre-school institutions (Public and Private). These interest groups range from governmental agencies and international donors and partners. These agencies provide technical and monetary support and also monitor to check the achievement of their objectives. Monitoring groups and interest such as the Global Partnership for Education (GPE), UNESCO, UNICEF and local agencies such as the Ministry of Education and the Department of Social Welfare are among some of the institutions engaged in the supervision and monitoring of several aspects of pre-school education.

In the Republic of Mauritius, The Early Childhood Care and Education Authority (2012) is in charge of the registration of pre-schools, supervision of educational activities and teacher education. They implement policies, projects and activities of Government with regard to early childhood care and education in the Republic of Mauritius. They also set norms and standards for play equipment, play materials, play space, furniture, books and children's literature used by educational institutions. The authority is in charge of the registration and supervision of educational institutions, their managers, educators and other staff engaged in early childhood care and education and advice on the development of training programmes on early childhood care and education for educators and other staff in educational institutions. The Authority also administers the payment of any form of grants to registered educational institutions and manages grants in collaboration with the relevant Ministries.

Adams & Rohacek (2002) and Helburn & Bergmann, (2002) as cited in Magnuson et al (2004) states that in the United States of America, the federal government does not regulate these programmes, and state regulations vary widely in terms of both stringency and enforcement. In the Gambia, The Ministry of Education provides technical assistance for ECD Centres while the Ministry of Community Development supports Daycare Centres and the Ministry of Health and Social Affairs supports Clinics. But the overall administrative and policy responsibility for IECD lies with the Ministry of Local Governments, which oversees a national multisectoral working group (Soo-Hyang, 2000).

Magnuson et al. (2004) indicate that one way to measure quality is through structural features of programmes such as child-to-staff ratios and teacher education. Another way of assessing quality is the direct assessment by trained observers who

rate the quality of the learning environment and child-caregiver interactions. Using these observational measures for recent reviews, Blau (2001); Helburn & Bergmann (2002); Smolensky & Gootman (2003) as cited in (Magnuson et al., 2004) have shown that few center-based programmes are of high quality in terms of learning environment and that quality is low for a substantial proportion. Magnuson et al reports that the Cost, Quality, and Child Outcomes Study conducted in 1993 in USA revealed that only 24% of centers serving pre-school-aged children provided good or developmentally appropriate care, while 10% were rated as being of poor quality; positive child-caregiver interactions were also observed in fewer than half (Helburn, 1995). Data from the NICHD Early Child Care (2002a, 2002b) suggest similarly low rates of positive child caregiver interactions in center-based care.

In Ghana, the Department of Social Welfare is responsible for registration and maintenance of standards in all crèches and day care centres for children aged 0-2 while the Ghana Education Service (which has the responsibility of implementing pre- tertiary education policies formulated by the Ministry of Education) is responsible for curriculum development for children aged 3-5 years. ECD activities have however been constrained by lack of collaboration and coordination between these two principal agencies. (International Bureau of Education, 2006)

2.9 Early Childhood Policies and Interventions

Early childhood development which incorporates the physical and intellectual development of children has several benefits in terms of improved nutrition and health, higher intelligence scores, higher school enrollment, less grade repetition, fewer dropouts, and increased participation of females in the labour force. Berlinski, Galiani, & Manacorda (2007), admits that a large body of literature in neuroscience, psychology and cognition makes the case for early childhood interventions.

Woodhead (2007) professes that the early years are formative of children's long-term prospects and it is one of the most ancient, enduring and influential themes shaping early childhood policy. He continues that although interventions are made to mitigate differentials due to economic and social statuses, concerns are greatly centered on curriculum and pedagogical assumptions and how they are developmentally appropriate economic theories of human capital and political theories of social justice.

Governments all over the world acknowledge the significant benefit of early child education and care and have adopted this service as an intervention towards mitigating social and economic disparities between the rich and poor. The United States of America in 1965 initiated the Head Start programme for children from low income household and children with developmental delays or disabilities. The Head Start programme focused on health and nutrition, social services and parent involvement along with educational programme. These composite services experts have suggested promote school readiness of young children according to Magnuson et al. (2004).

The Dakar Framework for Action in 2000 also made the development of early childhood care and education its first of six main goals of urging governments to expand equitable access to quality early childhood services underscoring the importance of instituting policy in favour of the poor (World Education Forum, 2000).

2.10 Teaching Strategies in Early Childhood Education

Teaching strategies are methods used in implementing the curriculum are the arranged interactions of people and materials planned and used by teachers. They include the teacher's role, teaching styles, and instructional techniques (Siraj-

Blatchford, 1998) as cited in Bowman & Donovan (2000). Teaching strategies are imperative to be adopted in giving children a resounding foundational training before the commencement of formal education. According to Plato

And the first step... is always what matters most, particularly when we are dealing with the young and tender. This is the time when they are taking shape and when any impression we choose to make leaves a permanent mark

(Clarke and Clarke 2000, as cited in Woodhead (2007).

Table 2.2 is a teaching and learning model developed by NAEYC (1990) as a guideline in appropriate curriculum content and assessment. This model shows strategies based on pupils anticipated and unanticipated actions and how teachers could effectively planned to make learning comfortable to meet the needs of children.

Table 2.2 NAEYC Model of Learning and Teaching
Model of Learning and Teaching

What Children Do	What Teachers Do
Awareness Experience Acquire an interest Recognize broad parameters Attend Perceive	Create the environment Provide the opportunities by introducing new objects, events, people Invite interest by posing problem or question Respond to child's interest or shared experience Show interest, enthusiasm
Exploration Observe Explore materials Collect information Discover Represent Figure out components Construct own understanding Apply own rules Create personal meaning	Facilitate Support and enhance exploration Extend play Describe child's activity Ask open-ended questions, such as "What else could you do?" Respect child's thinking and rule systems Allow for constructive error

Inquiry Examine Investigate Propose explanations Focus Compare own thinking with that of others Generalize Relate to prior learning Adjust to conventional rule systems	Help children refine understanding Guide children, focus attention Ask more focused questions, such as "What else works like this? What happens if?" Provide information when requested Help children make connections Allow time for sustained inquiry
Utilization Use the learning in many ways; learning becomes functional Represent learning in various ways Apply to new situations Formulate new hypotheses and repeat cycle	Create vehicles for application in real world Help children apply to new situations Provide meaningful situations to use learning

Source: NAEYC and NAECS/SDE "Guidelines for Appropriate Curriculum Content and Assessment for Programmes Serving Children Ages 3 Through 8", (1990).

2.11 Early Childhood Curriculum

Curriculum, or the content of teaching, may be designed to encourage learning processes (memory, attention, observation) and cognitive skills (reasoning, comparing and contrasting, classification), as well as the acquisition of specific information, such as the names of the letters of the alphabet (Wiggins and McTighe, 1998) as cited in (Bowman & Donovan, 2000). The Commonwealth Of Learning defines curriculum as a composite whole including the learner, teaching and learning methodologies, anticipated and unanticipated experiences, outputs and outcomes possible within a learning institution (The Commonwealth of Learning, 2000). Curriculum is the totality of learning experiences provided to students so that they can attain general skills and knowledge at a variety of learning sites (Marsh, 2009).

Curriculum is composed of the experiences of children for which the school is responsible, having content, being planned and comprising of a series of courses to be undertaken by students. Curriculum is an organized framework that delineates the content children are to learn, the processes through which children achieve the identified curricular goals, what teachers do to help children achieve these goals, and the context in which teaching and learning occur (Bredekamp et al., 1992).

The curriculum of an educational institution is informed by curriculum perspectives which are theories of knowledge that serve as important sources of curriculum decisions (COL, 2000). These include the rationalist, empiricist, pragmatist and the existentialist perspectives that define curriculum decisions. Curriculum perspectives are defined with consideration for the learner, the teacher, methodology and curriculum. Table 2.3 illuminates the various curriculum perspectives and their approaches towards the variables of learner, teacher, methodology and the curriculum (content).

Table 2.3 Curriculum Perspectives designed by COL

Perspectives	Learner	Teacher	Method	Curriculum
Rationalist	Recipient of information	Source of ideas, facts and information	Drilling Lecturing Subject-based	Subject matter of symbol and idea
Empiricist	Recipient of information	Demonstrator of process	Lecturing Teacher-centred	Subject matter of the physical world
Pragmatist	Experiences knowledge	Researcher, project director	Inquiry Participatory Problem-solving	Problem solving Hypothetical Subject to change Problems Projects
Existentialist	Ultimate chooser, search for personal identity	Facilitator of choices	Inquiry Discovery	Subject matter of choices Not rigid

Source: COL, 2000

Early pioneers and contemporary thinkers such as Piaget and Vygotsky were influential in curricula development and implementation for early childhood development through their influence, the play based learning and the notion of Developmentally Appropriate Practice (DAP) were adopted, highlighting the importance of child-centered and age appropriate practice (Bowman & Donovan, 2000). DAP however, ignored the influences of cultural, social and political traditions, powers and systems that are intrinsic assuming universal truths and laws of child development and learning. This criticism led to the modification of DAP to Developmentally and Culturally Appropriate Practice (DCAP) to emphasize the fact that children's learning of culturally bound, informed, influenced and determined by other powerful and dominant groups.

Papatheodorou (2009) writes that the expansion of early childhood provision and the economic investment made for such provision has gradually led to the introduction of curricula meant to establish the benefits and returns of the provision. She admits that some curricula borders on issues such as being (ontogeny), belongingness and connectedness with others, community and place and that others are also focused on outcomes-based developmental models that celebrate individuality, personal achievement and children's becoming. Curriculum is an organized framework that delineates the content children are to learn, the processes through which children achieve the identified curricular goals, what teachers do to help children achieve these goals, and the context in which teaching and learning occur (Bredekamp et al., 1992).

The Northern Ireland Council for the Curriculum Examinations and Assessment (NICCEA, 1997) proposes that young children require:

1. a safe, secure, healthy and stimulating environment where there is adequate supervision;
2. opportunities to investigate, satisfy their curiosity, explore the environment inside and outside the playroom, extend their sense of wonder, experience success and develop a positive attitude towards learning;
3. appropriate periods of time for learning through sustained involvement in play;
4. interaction with sensitive and understanding adults. It is important that children feel secure in their relationships with adults and that they know that the adults are there to support them;
5. adults who will treat them as individuals and sensitively participate in their play.

Given these needs, the NICCEA (1997) recommend that young children require a curriculum which:

- meets their physical, social, emotional and cognitive needs at their particular stage of development;
- motivates, challenges and stimulates them;
- is broad and balanced, allowing children to make choices and providing them with opportunities, through play and other experiences, to develop the learning.

Areas worthy of notice for consideration in the development of curriculum for children, according to the Northern Ireland Council for the Curriculum, Examinations and Assessment, are as follows:

- **Personal, Social and Emotional Development:** this is where children's personal and social skills, values and attitudes acquired through their

interactions and experiences within their homes and immediate environment are recognized and fostered. Opportunities to play activities, stories, rhymes, music and drama, the environment and personal health and hygiene are given to children giving them a sense of personal worth, self-confidence, self-control and discipline.

- **Physical Development:** this is where the psychomotor skills of the child are developed through freedom of movement, inventive, adventurous and stimulating play. Concurrently, it provides children the opportunity to develop their social skills and affect their learning and also develops their self-confidence.

- **Creative/Aesthetic Development:** this is where children express their ideas, communicate feelings, use their imagination through exploration of variety of materials and the appreciation of colour, shape, texture and sound. Children are made to draw, paint, work with paper, card, wood, fabrics and scrap materials given the opportunities to work with malleable materials and also participate in simple musical activities such as singing and listening to music. All these experiences assist in the emotional development and promote aesthetic awareness and serves as an avenue for self-expression of children.

- **Language Development:** children's listening and communicative skills are fostered as they talk with their teachers and play with their peers. Through carefully chosen comments and open questions, children are assisted to think and build their confidence in the use of language. Children are exposed and

made aware of and use other forms of communication such as painting, drawing, drama and other forms of non-verbal communication. Language development is therefore essential due to the growth of vocabulary and the development of listening and conversational skills through expression of thoughts, ideas, and feelings with increasing confidence and fluency.

- **Early Mathematical Experiences:** children begin to understand early concepts of size and quantity. Through effective play, mathematical concepts are fostered informally through sorting, matching, ordering, sequencing and counting. They begin to understand and use positional words such as in front of, behind, above and below and also talk about shapes in their environment.
- **Early Experiences in Science and Technology:** through children natural curiosity and early childhood education providers making available wide variety of activities and experiences in play, children develop skills and concepts in science and technology.
- **Knowledge and Appreciation of the Environment:** for children to develop knowledge and understanding of their environment opportunities of experimenting with a wide variety of play materials, talk about topics arising naturally from their experiences, the weather and seasons, where they live, exploration of their immediate inside and outside environment and other activities need to be provided.

What this curriculum means is that after children have experienced appropriate pre-school practices and imbibed characteristics and skills, they are most likely to develop a sense of personal worth through increased self-confidence, control and discipline.

2.12 Assessment in Early Childhood Education

Assessing the cognitive and developmental performance of children is essential to their development. Effective assessment enables teacher and parents of children to understand what the child knows in order to determine the best way to help them learn effectively. Assessment is the ongoing process of observing, recording and otherwise documenting the work children do and how they do it, to provide a basis for a variety of educational decisions that affect the child.

The Bayley Scales of Infant Development (BSID), a set of individually administered developmental scales designed to measure current developmental functioning in the areas of cognition, motor skills, and behavior. The BSID developmental scales used for assessment are the mental scale, motor scale and the behavior rating scale. The Bayley scale was created by Nancy Bayley during her work on the Berkeley Growth Project has its contents and structure based on infant and child development research from a myriad of theoretical perspectives (Lennon, Gardner, Karmel, & Flory, 2008).

The NAEYC's (1990) guidelines about what, when and how to teach children recommend that assessment of their learning should cover these thematic areas:

1. Child development knowledge
2. Individual characteristics of children
3. Knowledge base of various disciplines
4. Values of our culture
5. Parents' desires
6. Knowledge children need to function competently in our society

According to UNESCO (2007), accurate and informed assessments of early childhood education in a data deficient environment has a dysfunctional impact on the monitoring and measurement of progress of children. Magnuson et al (2004). Study of inequalities in pre-school education and school readiness of children used the Peabody Individual Achievement Tests-Revised and the Woodcock-Johnson Pscho-Educational Battery- Revised test to assess the cognitive development of the children using both multiple choice and open-ended questions in reading and math skills.

Formal assessment at the pre-school level is not encouraged in Ghanaian schools. It is emphatically captured in the Curriculum for Kindergarten “At this stage, assessment must be as informal as possible. Teachers must avoid the temptation of subjecting children’s work to formal assessment” (Report of the President’s Committee on Review of Education Reforms in Ghana, 2002 p.iv). Informal techniques such as observation, conversation, gallery works where children go round to appreciate each other’s work are however done.

2.13 Child Literacy

One of the purposes of Early Childhood education is the development of the literacy and numeracy skills of an individual. These developmental goals are shaped through interactions between the child and his or her immediate environment (Emergent environment; this is the surroundings of the child from where he or she learns through physical and social interactions). Emergent literacy is concerned with the earliest stages of learning for the child between the periods of birth and the time when the children is able to read and write conventionally. Emergent literacy consequently connotes the reading and writing behaviours that precede and develop into conventional literacy (Lawrence-Weiss, 2012). Emergent literacy therefore

consists of the skills, knowledge and attitudes that are presumed to be developmental precursors to conventional forms of reading and writing and the environments that support these developments (Whitehurst & Lonigan, 1998). The experiences of children that may affect the development of skills, knowledge and attitudes comprise the emergent literacy environment (Whitehurst & Lonigan, 1998).

During the emergent literacy stages of children in pre-schools, they are given the opportunity to experiment with and learn about books both independently and interactively. Early experiences with books as sources of interesting images and stimulation form the foundation of literacy. Through experiences with books (both purchased and teacher-made), children learn emerging literacy skills such as: where to find the title, author, and illustrator; how to hold (handle) books; where the book begins and ends; that words- not pictures- are read; that prints goes from left to right and from the top to the bottom; that the beginning of a sentence sounds different from the end of the sentence; and that reading is a way to learn information (Miller & Gibbs, 2002).

The importance of children's literature research has established that this is significant to their development. It helps them develop an appreciation for reading as a pleasurable aesthetic experience. Children's literature entertains, stretches imagination, elicits a wealth of emotions, and develops compassion. It generates questions and new knowledge, affords vicarious experiences of other worlds, and provides encounters with different beliefs and values (Pantaleo, 2012).

Through books children have the opportunity to read, engage, to relate to the personal photos, to relate to the people, pets and places in the photos. They also become discover by viewing the photos in the book and subsequently learn words based on the personalized text that linked their memory recall to the photos. Children

also colour illustrations in books which help them to develop their psychomotor skills and concurrently their writing of numbers, and letters (Lawrence-Weiss, 2012).

2.14 Classroom Environment

According to Wardle (2009) as cited in Community Playthings (2009), after human interaction, the physical environment is critical in the care and learning of young children. It must stimulate and structure their world, while conveying the value of what children naturally do best—play, explore and manipulate.

Child care professional Anita Olds (2009) as cited in Community Playthings (2009), lists five attributes to consider for each activity station.

1. **Location:** Because Children love to explore and discover, entries and exits need to be clearly defined, and pathways direct. Activity areas need to be inviting islands, with room to detour around them
2. **Boundaries:** Boundaries protect children's activities from traffic, lunch and other distractions, encouraging sustained play. It enables children to explore using all their senses and also provides them the privacy.
3. **Play and Sitting Surfaces:** playing and sitting surfaces must be appropriate to support activities children undertake.
4. **Storage:** The materials children need in each activity area should be stored conveniently at hand, and displayed attractively for effective use.
5. **Mood:** space allocation in a study environment impacts greatly on the behaviour of the child. A tight space may encourage working together but can also lead to aggression and frustration. Consequently, appropriate space allocation reflecting a corresponding mood for children to explore and learn

The learning environment which is the use and organization of the space in the classroom, the daily schedule and routines, and the social and emotional atmosphere is very crucial in the development of children (The Creative Curriculum Framework, 2011). The learning environment meets children's developmental needs. It makes children including those with special needs feel safe and comfortable and that they belong. As a result, the learning environment helps children become independent and confident learners.

Early childhood experts who developed the creative curriculum examined the learning environment from three perspectives; the setting up and maintaining of the classroom; establishing a structure for each day; and creating a classroom community. In setting up and maintaining of the classroom, the physical space of the Creative Curriculum classroom is organized into 10 interest areas namely blocks, dramatic play, toys and games, art, library, discovery, sand and water, music and movement, cooking, and computers and outdoors. Interest areas organized within the classroom environment offer multiple opportunities for children to explore, discover, and grow. The physical environment includes the size of the room, the colours of the walls, the type of flooring, the amount of light, and the number of windows. Experts further argue that the arrangement of furniture and the materials involves children not only in learning but also in caring for the classroom and what is in it. A physical setting that is safe, attractive, comfortable, and well-designed helps children engage in learning and developmental activities offered in the curriculum supporting learning goals for children enabling teachers to observe and interact with them positively.

Establishing a structure for each day involves the daily routines and schedule that create a sense of order within the learning environment. This makes children

aware of what to expect, and understand what is expected of them. The assurance that their environment is predictable and familiar, settles them into learning and function as part of a group creating a sense of order around and inside them.

In creating a classroom community, the social and emotional environment is greatly considered. This is where teachers relate to children in positive ways helping them do the same with one another. The positive social climate helps children feel good about school and learn to the best of their ability.

Creative Curriculum Experts provide guidelines for developing interest areas for children. In setting up interest areas, one has to:

1. Note the location of electrical outlets, windows, doors, a sink, and storage space.
2. Consider what moveable furnishings such as shelves, tables, freestanding easels, and dramatic play furniture are available for defining space.
3. Take an inventory of the particular challenges in your room: built-ins, columns, radiators, exposed pipes, the locations of doors that cannot be blocked, and so on.

Art is purposeful in the development of children especially at the early childhood level due to its potency in developing the creative and intellectual imagination and expressions of children. Art is typically an area of exploration and competence for pre-schoolers (Potter & Edens, 2004). This therefore makes it imperative for pre-school classrooms to be provided materials for drawing, painting, three-dimensional art and other activities that encourage individual expression (Harms, Clifford, & Cryer, 1998 as cited in Potter & Edens (2004).

Developing interest areas which subdivides the classroom space to accommodate children will make them feel more comfortable to play effectively.

Below is an illustration (Fig. 2.1) of a creative curriculum classroom indicating in numerals interest areas in a model classroom.

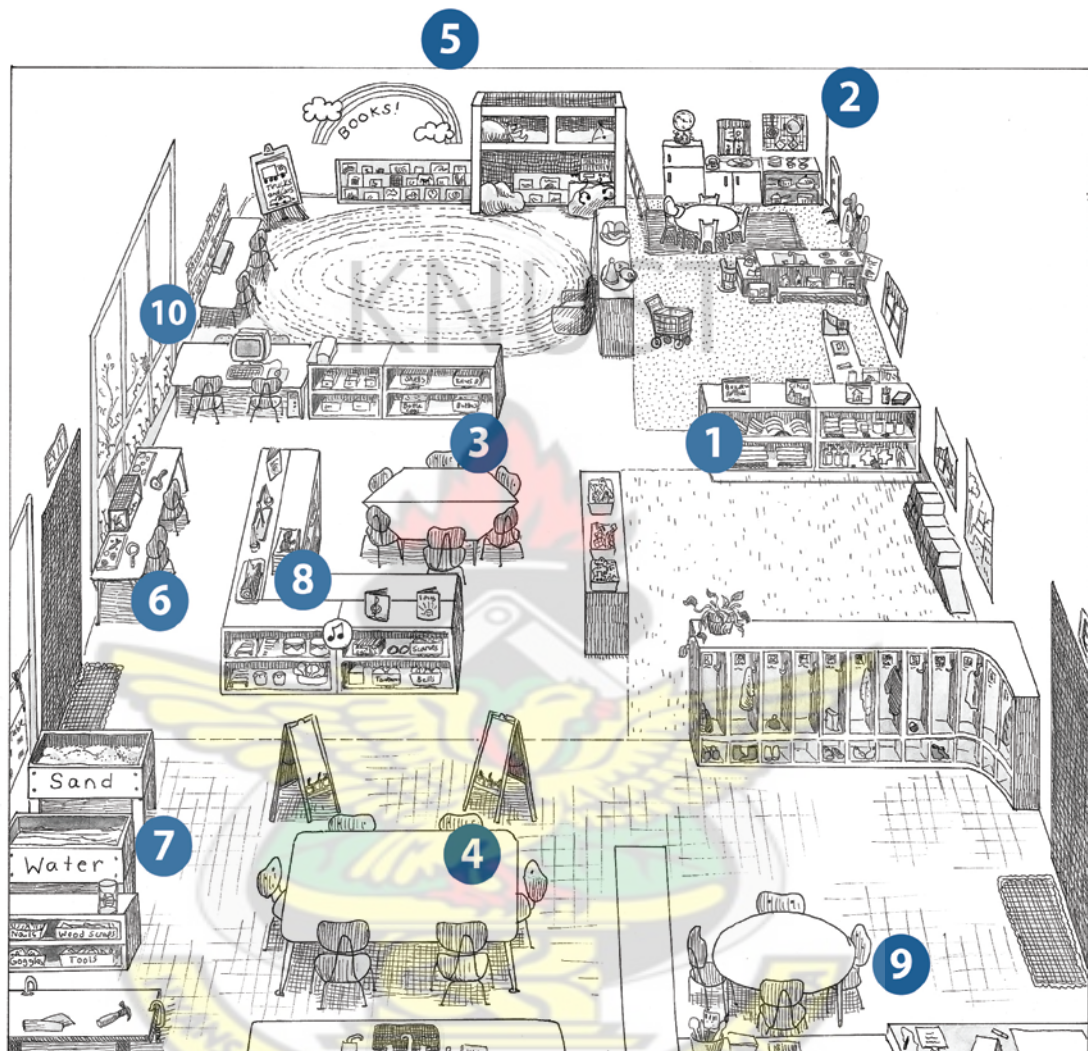


Figure 2.1 Creative Curriculum Classroom

Legend

1. Blocks
2. Dramatic Play
3. Toys and Games
4. Art
5. Library
6. Discovery
7. Sand and Water
8. Music and Movement
9. Cooking
10. Computers

Creative curriculum experts further provide the following guidelines for planning space for educational purposes.

1. Establish traffic patterns for entering the room, putting belongings in cubbies, using the bathroom, moving from one area to another.
2. Clearly define areas that need protection, such as block building and a cozy library nook, using shelves and the walls.
3. Locate interest areas that are relatively quiet, such as books, art, computers, and games and toys, away from noisier ones, such as blocks and woodworking.
4. Decide which areas need tables—toys and games, art, writing or book area, cooking. Because young children use the floor and open spaces for so much of their play, keep the number of tables to a minimum. Remember that you need just enough table space so everyone, including adults, can be seated at one time for snacks or meals. The tables should remain in the interest areas where they are located, not moved together cafeteria style.
5. Think about activities that are affected by floor coverings. Ideally, messy activities such as art, sand and water, and cooking should be on a floor that can be washed. Also assess whether you will need drop cloths, pieces of vinyl, or a shower curtain. Blocks require a comfortable, soft floor where children can sit or work on their knees.
6. Place interest areas near needed resources. Art, water play, and cooking activities should be near a water source; computers, CD players, and tape recorders need electrical outlets.
7. Reserve areas with lots of light for places where children will look at books, write and draw, care for plants.
8. Organize the room so you can see as much as possible from every location to ensure children's safety. Regulations on child abuse prevention require supervision of children at all times, which means always having children in full view.

The effectiveness of the physical environment is determined when children make choices and select activities on their own, use materials appropriately and creatively once they enter an interest area, stay involved with an activity for a sustained period of time, experience success when they play and Help care for materials.

2.15 Challenges in Pre-school Education

All children have physical, social and emotional and cognitive needs. Physical needs include food, clothing, shelter and medical care. Basic social and emotional needs include a consistent and predictable relationship with an attentive and caring adult who has high social and moral expectations, strong peer acceptance and freedom from exploitation and discrimination in their communities (Weissbourd, 1996 as cited in White & Isenberg (2003). Minimal cognitive needs include the ability to communicate thoughts and feelings, to engage in constructive problem solving and to experience success both at school and in the community (Case, Griffin, & Kelly, 2001; Weissbourd, 1996 as cited in White & Isenberg, 2003).

Children who grew up with their basic physical and material needs met are likely to trust themselves and their community, possess a zest for life, and build on inner resourcefulness to participate in society regardless of the obstacles they face. They are also more likely to develop a sense of confidence and competence in family, school and community endeavours as a result of repeated successful coping experiences (White & Isenberg, 2003). On the other hand, children who grow up without having basic needs met are at a clear disadvantage for a healthy start in life (White & Isenberg, 2003). Many of these children exhibit particular behavioural and developmental characteristics such as developmental disabilities medical fragility, poor school performance), making them vulnerable to being able to function effectively as learners (White & Isenberg, 2003)

In poor countries, a large share of the population is excluded from the education system already at an early age and well before completion of the compulsory schooling cycle. Exclusion from the school system encompasses in

varying combinations failure to enroll, late entry, intermittent and irregular attendance, high retention rates and eventually early drop out (UNESCO, 2005).

Although there is worldwide increase in pre-school education, access and quality in developing countries cannot be equaled to the developed nations. This is evident with statistics from the Global Partnership for Education (2012) showing that Sub-Saharan Africa showed the lowest gross enrollment ratios of 18th in 2009 where children from privileged backgrounds were four times more likely to receive preprimary education than poor children.

According to the GPE (2012), the principal challenge to ECEC programmes is an effective and well-targeted intervention, lack of adequate funding, limited local and national administration capacity and low social demand for quality ECCE Services. Inadequate ECCE services, the low quality or lack of infrastructure, teaching and learning materials, poor curricula which are not well adapted to the needs of children coupled with the lack of qualified teachers are some of the challenges bedeviling pre-school education in Sub-Saharan Africa.

The provision and access to quality early childhood Education Services faces myriad of challenges worldwide. In Central and Eastern European Countries and the Commonwealth of Independent States (CEECIS), only a fraction of children between ages three to six years old in urban areas have access to ECEC services especially in the poorest countries (Global Partnership for Education, 2012). According to the Global Partnership for Education (GPE) in 2009, 46% of the world's children were enrolled in pre-school education as compared to 33% in 1999. Although there is worldwide increase in pre-school education, access and quality in developing countries cannot be equaled to the developed nations. This is evident with statistics from the GPE showing that Sub-Saharan Africa had the lowest gross enrollment ratios

of 18% in 2009. However, children from privileged backgrounds were four times more likely to receive pre-school education than poor children.

A UNESCO (2007) study in Romania noted that the challenges of entry into early childhood facilities were the lack of correct individual documentation like birth certificates, poverty, social and political strife and transportation. Other reasons were the fear of abduction and child trafficking which prevented some families from having the confidence to place their young children within early childhood educational institutions. Parental fears for children's welfare and safety in anticipation of prejudice on the part of the staff of institutions and non-Roma pupils and their parents was also a factor that limited access to pre-school. Subsequently, the fears within some families that their children were not competent in the official language of instruction in the early childhood educational setting and the use of buses as part of Roma desegregation programmes, made access to early childhood education difficult and or compromised for some families.

How well early childhood professionals meet children's essential needs strongly influences how successful they will be as learners and as future citizens (White & Parker, 2003). Giving people a good start at a young age is therefore the key role of a Nursery or Pre-school Teacher who plays a vital role in children's social, personal, physical and emotional development.

Family characteristics also mediate the effects of care and education programmes on children's development (Bowman 1993). Family factors associated with children's school readiness are parental aspirations and expectation for achievement, parental strategies for controlling child behavior, maternal teaching style (affective and contingent), linguistic orientation, beliefs about the causes of child success and failure in school, children's home environment (Bowman, 1993).

CHAPTER THREE

METHODOLOGY

3.1 Overview

The methodology comprises discussions of research design adopted in achieving the objectives of the study. Data collection instruments used in the study were interviews and observation. The study includes assessments of children's basic knowledge required for entry to primary one, survey of parents, teachers, school proprietors and observational rating of the school environment (classroom, playground, school compound and other facilities) by the researcher. Furthermore, a conclusion of how data collected were analysed is discussed.

3.2 Research Design

The research design refers to the overall plan employed by the researcher to obtain answers to the research questions and for testing the hypothesis formulated (Agyedu et al, 2007 as cited in (Norley, 2009). It encompasses decisions about how the research is conceptualized, the conduct of the research and the type of contribution the research is intended to make to the development of knowledge in a particular field of study in developing a research design, theoretical, methodological and ethical considerations relevant to the study are taken (Cheek, 2008).

It is a fundamental responsibility of every researcher to do all in his or her power to ensure that participants in a research study are protected from physical or psychological harm, discomfort, or danger that may arise due to research procedures (Fraenkel & Wallen, 2009). The researcher therefore designed the research procedure with this ethical antecedent in mind because data gathered involved children who may not understand the purpose of the research or be aware of their rights and thereby need to be protected.

The researcher adopted the qualitative research method. Qualitative research provides the researcher with a narrative investigation and description of the quality of relationships, situations, events, materials and conditions as observed in the natural setting of the school and classroom. Qualitative research in its purest sense follows the paradigm that research should be conducted in the natural setting and that the meanings derived from research are specific to that setting and its conditions thus being a holistic and peculiar interpretation of the natural setting under study (Wiesma & Jurs, 2009).

Bogdan and Biklen (1992) as cited in Fraenkel and Wallen (2009) describe five features of qualitative research as follows:

1. The natural setting is the direct source of data and the researcher is the key instrument in qualitative research.
2. Qualitative data are collected in the form of words or pictures rather than numbers.
3. Qualitative researchers are concerned with process as well as product.
4. Qualitative researchers tend to analyse their data inductively.
5. How people make sense out of their lives is a major concern to qualitative researchers.

Case Study

In order to arrive at a detailed description and understanding of the teaching and learning situation in the pre-schools and identify the factors that result in curriculum inequality in the public and private pre-schools, the researcher adopted the case study research method. The case study method is a research approach in which one or a few instances of a phenomenon are studied in depth (Blatter, 2008). It is

argued that the strong emphasis in recent theoretical approaches of aspects such as ideas and timing is favourable for the adoption of case study approaches. The setting studied by the researcher included classroom environment, playgrounds, sleeping facilities, teacher-student interactions, peer interactions among the children, and the general school environment. Adopting the case study method of qualitative design made it possible to observe the school setting which has the propensity of influencing school outcomes of the pupils.

3.3 Library Research

The researcher obtained resources for the literature review from World Bank documents at the KNUST Main library, Doctoral and Masters theses, and books at the Art Education library, KNUST and other online repositories and data banks such as JSTOR, ERIC, ECR, warez-bb.com amongst others.

The library research enhanced the researcher's active study skills in research and provided a learning zone where facts and information were obtained in a myriad of contexts.

3.4 Population for the study

Ghana as at the 2009/2010 academic year according to the Ministry of Education (MOE) had a total of 17,471 kindergartens with 12,481 and 4,990 being public and private respectively. Out of this national figure, the Ashanti Region had 2,034 public kindergartens and 1,133 private kindergartens. As shown in Table 3.1 and 3.2.

REGION	NUMBER OF KINDERGARTENS		
	Public	Private	Total
Ashanti	2,034	1133	3,167
Brong Ahafo	1,527	433	1,960
Central	1,261	667	1,928
Eastern	1,594	575	2,169
Greater Accra	532	1100	1,632
Northern	1,560	182	1,742
Upper East	599	54	653
Upper West	446	27	473
Volta	1,429	311	1,740
Western	1,499	508	2,007
Total	12,481	4,990	17,471

Source: MOE Table 3.1 Number of Kindergartens by type and Region (2009/2010)

The total enrolment for Ashanti Region was 272,244 pupils with 136,948 being boys and 135,296 being girls. Out of the total enrolment of 272,244 pupils in the kindergartens, 198,797 were in the public kindergartens and 73,447 were in the private kindergartens.

REGION	ENROLMENT IN KINDERGARTENS								
	PUBLIC			PRIVATE			TOTAL		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Ashanti	100,035	98,762	198,797	36,913	36,534	73,447	136,948	135,296	272,244
Brong Ahafo	78,259	78,414	156,673	14,421	14,573	28,994	92,680	92,987	185,667
Central	56,645	57,326	113,971	16,894	16,570	33,464	73,539	73,896	147,435
Eastern	65,713	65,774	131,487	14,758	14,358	29,116	80,471	80,132	160,603
Greater Accra	23,355	23,637	46,992	26,404	26,121	52,525	49,759	49,758	99,517
Northern	71,182	67,643	138,825	6,272	5,951	12,223	77,454	73,594	151,048
Upper East	29,530	29,578	59,108	2,192	2,089	4,281	31,722	31,667	63,389
Upper West	21,204	21,654	42,858	1,111	1,145	2,256	22,315	22,799	45,114
Volta	57,783	57,162	114,945	7,812	7,768	15,580	65,595	64,930	130,525
Western	78,530	77,462	155,992	14,820	14,378	29,198	93,350	91,840	185,190
Total	582,236	577,412	1,159,648	141,597	139,487	281,084	723,833	716,899	1,440,732

Source: MOE Table 3.2 Enrolment in public and private Kindergartens by Region (2009/2010)

With respect to teachers, Ashanti Region also has a total of 9,099 Kindergarten teachers. Out of this regional figure, 6,815 were in public kindergartens and 21,284 were in private kindergartens. The number of trained teachers for the public kindergartens was 2,818 with 151 in private establishments. The national population was 43,943 kindergarten teachers with 11,643 being trained teachers.

Ideally, the population of this research study was teachers, support staff and pre-school children in the all the nursery schools within the Oforikrom Sub-metro district of Kumasi in Ashanti Region. The researcher's target population was the class teachers and pupils of KG1 in all these nursery schools in Kumasi.

The Ayigya MA nursery school was selected from the public early childhood education facilities in the Oforikrom district and KNUST Nursery to represent privately own and operated early childhood education centres. KNUST nursery was selected because of its homogeneous population and its geographical location in an educational setting.

3.4.1 Accessible population

The accessible population consisted of the Ayigya MA Nursery School and the KNUST Nursery School in Kumasi. A total of 87 children were involved in the observation which took place in selected classrooms and the playgrounds of the two nursery schools. Out of this number, 42 children (representing 48%) of the accessed pre-schoolers were in Ayigya MA Nursery with 45 in the KNUST School. Ayigya MA KG1 had 23 boys and 25 girls with the average age being four years. The ages of KNUST pupils ranged from three to six years. 45 children representing 52% of the accessed pupil population schooled at the KNUST Nursery school.

3.4.2 Sampling

The importance of sampling is that you can determine the adequate respondents from the total number of target population (answers.com, 2012). Effective sampling therefore gives room to generalization of the findings to the targeted population making the research very practical and economical to conduct yielding more comprehensive information.

Kish (1965) as cited in (Wiersma & Jurs, 2009) has identified four criteria which a good sampling design should meet: goal orientation, measurability, practicality and economy. In this regard, the research sample was based on the objectives of the study: identifying the factors for curriculum inequalities in public and private pre-schools. Field data culminating into primary data were collected based on the purposive sampling technique (Fraenkel & Wallen, 2009) to arrive at results that represent the general state of the sampled population under study.

Ayigya MA and KNUST Nursery school were selected because they are a paradigmatic example of typical public and private pre-schools in Kumasi because they are virtually located in the same administrative district. The schools selected also had pupils from vastly different socio-cultural and economic backgrounds.

3.5 Data Collection Instruments

Interviews and observation were used to collect data for the study. Interviews were granted teachers of the pre-schools and some pupils. Interview guides were designed to lead respondents through a sequential line of questioning that also allowed follow-up questions and other auxiliary questions to be asked. In-depth interviews provided a comprehensive description of teachers' thoughts and perceptions with regard to occurrences and activities, procedures and strategies observed during the research (Fraenkel & Wallen, 2009).

For the purposes of learning about the behaviour and interactions within the classroom setting of children, a naturalistic observation was done (Fraenkel & Wallen, 2009). The researcher attempted to capture the experiences of the participants with a camera based on the observational research assumption that behaviour is purposeful and reflects deeper value and belief. In certain instances, video recordings were used to capture activities as it occurred to discover patterns and trends described in their activities. Observations made collected sociodemographic and descriptive data needed to understand the background and actions of the research subjects. Field notes, photographs, audio and video recordings were used in the observation and provided data for analysis and discussions.

The researcher adopted the complete observer role (remaining relatively unobtrusive) to gather data and describe the classroom activities vividly. The researcher was present with the participants (research subjects) in their natural settings without interacting with them directly. And overt non-participant observation role was adopted because the researcher was neither a teacher nor a pupil and also because of the spontaneous nature of activities the pupils and teachers being studied were engaged in, which provided the researcher with insights into patterns or routines.

3.6 Types of Data Collected

Data gathered were mostly non numerical obtained through verbal and non-verbal with very few being numerical. Data collected were in the form of pictures, video and audio recordings, writings from field notes and concepts read from related literature. Primary data collected gave the researcher an overview of events, situations, conditions that prevailed within the pre-schools under study.

3.6.1 Primary Data

Primary data collected by the researcher from Ayigya MA and KNUST Nursery schools were in the form of field notes and photographs derived from observation and interviews. This enabled the researcher to draw conclusions from the research findings to reflect the state of private and public pre-schools within the Oforikrom district of Kumasi. Data collected are subject to verification through further research either with the same sample or the study being replicated in other pre-schools. Primary data were derived from both verbal and nonverbal survey. Verbal data sources were gathered from interviews granted in the form of field notes and audio recordings with pictures of pictures of activities and items composing the nonverbal data sources.

3.6.2 Secondary Data

Empirical data were also collected from online repositories and from individual authors in the field of early childhood education through casual discussions. Notable amongst these valuable sources of research data is the World Bank report on Brazils early childhood education programmes.

3.7 Administration of Instruments

Data collection instruments used for the research study are interviews and observation. Interviews were granted the proprietors or school heads of the two pre-schools to find out the pedagogical foundations of the institution, teacher recruitment procedure, curriculum used and other guidelines adopted by the schools. The observation sought to find out the facilities available with the two pre-schools under study, teacher's usage of available teaching materials, teacher-pre-schooler interaction

and peer interactions among the pre-schoolers. The researcher further observed the schools environment, sanitary and health facilities amongst other things.

3.8 Data Collection Procedures

Interviews were granted to the teachers. The interview gathered information on the legal requirement in establishing and managing early childhood education facilities. Data was collected within the months of February and March 2012 and includes assessments of the skills of children, survey of selected parents, teachers, proprietors and rating of the classroom and general school environment by the researcher. The interviews granted to the teachers centred on the background of the teachers; including their academic qualifications, number of years in the business of teaching especially the particular class they were working with at the time of the study, and experiences gathered over the years. The researcher inquired about the teachers' experiences to understand how it influences their classroom teaching and management. Other areas of enquiry were the background of the children, including their family background, health status, languages spoken, learning styles and criteria for enrolment.

Data were also gathered on the area of assessment, curriculum used, its source and books used to deliver the content, the subjects taught, resources available and their quality. Other questions posed bordered on the appropriateness of the teaching and learning materials and convenience of the materials to the children.

The children were assessed to find out the impact of the school curriculum on their readiness for formal schooling through observation of expected developmental competences of a primary one entrant and also through the teachers' comments on their strengths and difficulties. The teachers were interviewed and also administered

questionnaires as a form of research documentation by the researcher. The teachers most especially because of their constant interactions with the children provided great insights (information) specific about the children, the classroom environment, anticipated and unanticipated experiences, outputs and outcomes peculiar to the learning environment and also their attitudes, education, motivation, classroom practices and other information relevant to the school readiness of pre-schoolers. The proprietors in both KNUST and Ayigya MA Nursery Schools provided information concerning the school, student body, classroom size and population, facilities available, teacher recruitment requirements, school policies and practices and their personal background and training history.

3.9 Data Analysis Plan

Data analysis is an integral part of qualitative research constituting an essential component in data gathering and in relating the research findings to concepts (van den Hoonaard & van den Hoonaard, 2008). Because the research instruments employed are interviews and observation, transcripts of the interviews recorded and observation notes were used in analysing the data collected.

The data collected was categorized and interpreted in terms of the commonness of theme or subject matter. A critical synthesis of the data was thereof made in order to arrive at an overview of the schools under study with regards to the underlining objectives of identifying and describing the curriculum used in the schools under study, identifying and comparing the level and quality of the resources available to the schools. The data analysis also considered the objectives of assessing how teachers use available teaching and learning materials and to assess the cognitive and social impact of pre-school on the children's readiness to primary one entry.

Precisely, thematic and comparative analysis were used in analyzing the data collected where data collected were categorized into themes and compared and contrasted among Ayigya MA and KNUST Nursery Schools. Exercise (test) results were analyzed using SPSS (Statistical Package for the Social Sciences).



CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Overview

This chapter entails presentations of data collected and an analysis and interpretation based on other research findings and philosophies reviewed. First, details of the researcher's observations over the research period amongst the subjects and the schools under study are described. Information gathered also from the interviews with the teachers and other respondents are also presented along with photographs. Interpretations and analysis derived from the data obtained have been presented and aligned to literature reviewed by the researcher.

4.2 Characteristics of the Pre-schools under studied

4.2.1 Ayigya MA Nursery School

The Ayigya MA Nursery is situated close to the Ayigya Zongo community park. The Nursery block of Ayigya MA School is an unattached classroom block of four classes serving both the A and B streams of the school. This means there are two classrooms for A and B streams. Although the A and B sections are ideally to run on the shift system, they both run concurrently from morning till afternoon when school closes. The school block is not walled, making it very challenging to conduct academic activities in an atmosphere disturbed by moving vehicles, intrusion of lessons by strangers and occasionally, stray animals. The school shares the same compound with both the primary and junior high units of the school. Plate 4.1-4.3 shows the buildings of the study school.



Plate 4.1 Front view of Ayigya MA Nursery School



Plate 4.2 Side view of Ayigya MA School



Plate 4.3 Entrance of KGI A of Ayigya MA School

The children are mostly of Akan, Ewe and other ethnic groupings from the Northern parts of Ghana. Majority of them live in the surroundings of Ayigya Zongo, *Affordable* and Sawaba. Linguistically, though the school is situated within a zongo community, most of the children speak Asante Twi, very few of them speak Hausa and other languages while in school. The Twi language is used to foster understanding of tuition and instructions by the teachers and support staff and also used by the children to make requests to the teacher and the support staff. This, according to the

class teacher, is supported by the GES policy of making children literate in their mother tongue or the local language of the community in which the school is located.

The average age in the class is four years with the youngest being three and the oldest, six years old respectively. Children at the Ayigya MA Nursery School walk to school by themselves or come with their older siblings who are also pupils of the same school. Although the children had no physical disabilities, it was observed that most of them looked very malnourished and unkempt. Not all the children also come to school in the prescribed school uniform (Plate 4.4) as shown in Plate 4.5.



Plate 4.4 A section of Ayigya MA Nursery pupils



Plate 4.5 Ayigya MA pupils in different uniforms during a lesson

The teacher explained this situation as a reflection of the economic backgrounds of the children's parents and guardians and their inability to provide the children's school needs. The parents and guardians of the children of both the A and B streams of the school constitute the Parent-Teacher Association which is mandated to deliberate on issues affecting the welfare of teachers and pupils and suggest ideas for improving the running of the school. Amongst the challenges the teacher and the support staff face is truancy on the part of the pupils. The researcher noticed over the period of the study that the KG1 class was never full, with two children attending school only on seven days out of the 63 days of required school attendance. This is a big challenge to pupil learning and preparation for formal schooling.

4.2.2 The KNUST Nursery School

The Kwame Nkrumah University of Science and Technology (KNUST) Nursery School (Plates 4.6 and 4.7) is located close to the Senior High School, which is not very far from the business area of the university. The Nursery school is fed by a crèche that is located close to the primary school that is located further away on the university campus. This is the school that admits graduates of the nursery school.

Unlike the Ayigya MA School, the KNUST Nursery School has a separate compound and two blocks of classrooms with an open sand filled playground.



Plate 4.6 A view of the KNUST Nursery School



Plate 4.7 The School compound and playground of KNUST Nursery School

4.3 School Environment

Of the two schools, the KNUST Nursery School has relatively better school environment in terms of classroom, playground and immediate surroundings. It has the cleaner of the two schools and has all its facilities available within the school compound which is enclosed. Ayigya Nursery is situated near a community refuse dump site, a community football park which is sometimes used for social events such as funerals and also shares the same toilet facilities with the community. This makes it very challenging for school authorities to control certain activities during school hours.



Plate 4.13 A view of the Ayigya MA Nursery School



Plate 4.14 A view of the KNUST Nursery compound

4.4 Classroom Environment

Classroom environment greatly influences the child's learning abilities and pace either by providing and complimenting the learning experiences of the child through interactive learning or inhibiting his or her desire to learn. Display items such as wall charts, posters, murals and readily accessible flash cards all provide avenues to catch the interest of the children within the classroom. The Ayigya MA Nursery School block has a corridor on both sides of the building with entry and exit doors to the classrooms as shown in Plate 4.15.



Plate 4.15 Views of the Ayigya MA Nursery School

The Ayigya MA Nursery classroom has two doors with a corresponding wire gauze trap door that prevents entry of flies and also allows in fresh breeze and light concurrently. The class has four functioning windows, 26 benches (one was broken). Ayigya MA's KG1A was painted yellow, a colour which is mostly used in homes and shops. It lacks electrical power supply and therefore has no electrical power sockets, bulbs and fans unlike the KNUST nursery school where these are available. Poor lighting makes vision very difficult in the Ayigya school especially when it is cloudy. The class has two water reservoirs (Plate 4.16), a gallon and a bucket that holds water for drinking and cleaning needs such as washing hands, bowls and drinking cups.



Plate 4.16 A view of the water reservoirs in class

At sleep time or storytelling periods, the children sit on one large and one medium mats. Ayigya MA Nursery School has two chairs (one wooden and one plastic) and a table for the teacher and the support staff who is also in charge of feeding and cleaning needs of the pupils. The class also has a wooden tray for storing writing slates, and a metal play box that contains Lego(s) blocks and toys which the children use during play periods (as shown in Plates 4.17 and 4.18). The children build the Legos by sorting and arranging them into items that they fancy or are dared to do by their peers. There are also empty metal cans, mostly empty beverage containers that the children also use in their play.



Plate 4.17 Children arranging Legos during play time at the Ayigya MA Nursery School



Plate 4.18 Children playing with Legos

At the rear of the classroom are the class cupboard (Plate 4.19) in which brooms, mats, slates, a pan containing the children's bowls and cups, and play items are kept.



Plate 4.19 A rear view of the Ayigya MA KG1A Classroom

The KNUST Nursery school

The KG1A classroom of KNUST Nursery school was painted green which provides the children with a serene ambience that is conducive for learning.



Plate 4.20 A view of the KNUST KG1 A Classroom

Both schools had displayed in the classrooms, wall charts, posters and murals. The KNUST Nursery School however, had in addition hanging boards displaying the English alphabets from A to Z with accompanying illustrations for each alphabet.

4.2.3 Facilities in the Classrooms

The KNUST Nursery School has amongst its classroom items 12 hanging charts including one calendar, number chart from 1 to 100, a chart of the national Anthem with national symbols and images. Others are illustrated English alphabet from A to Z, a wall clock, a movable blackboard at the rear, a whiteboard in front of the class, six louver glass windows, a door each at the front and rear of the class (only the front door was in use at the time of the study). They also have a wooden tray near the entrance of the classroom for keeping the children's school bags as shown in Plate 4.8.

Children at the KNUST Nursery are mostly children of workers of the university who range from labourers, teaching and administrative staff, but the school is also open to the general public. Some of the children live as far away from the school in communities such as Ejisu and Abuakwa. Children admitted to the KNUST Nursery school must be at least 3 years and nine months by 31st December of the year of entry. Unlike the Ayigya School, children in this school wear the same uniform. They are also ethnically diverse but have English as the main medium of instruction. The university environment also positions the children towards academic or school more than their peers in Ayigya.



Plate 4.8 A wooden tray for keeping school bags



Plate 4.9 A view of the KNUST Nursery School compound



Plate 4.10 A section of KNUST Nursery school awaiting assessment of their works

4.5 The School teachers

The KG1 teacher at Ayigya MA KG1 is a woman who had been in the teaching profession for about seven years with just five months of service at the kindergarten level. She had been teaching primary school previously and was brought to the pre-school in the middle of the previous term. She attended Holy Child College of Education at Takoradi and the University of Education at Winneba, where she earned a diploma in Basic Education through the distance education facility. In her studies for the diploma, she read a course on early childhood education which is her only foundational training in pre-school teaching. When asked why she was brought to teach at KG1 from the primary school, she said it is the norm for teachers who return from maternity leave to be posted to continue their teaching at the KG level. She had not participated in any workshop, seminar or conference geared towards

enriching the expertise of teachers although she expressed interest in attending one when she gets the opportunity. Her sources of preparing lessons are the GES teaching syllabus and Teacher's handbook. She is assisted by attendants. They know very well the names and backgrounds of the children in their care.



Plate 4.11 Ayigya KG1 teacher supervising her pupils

KG1 Teacher at the KNUST Nursery School

The class teacher of KG1A at the KNUST is also a woman who doubles as the assistant head of the Nursery school. She had been in the business of teaching for about 30 years, with experience teaching at the Primary and Junior High school levels for about 13 years, and 17 years at the pre-school level. She is a professional teacher and holds the Ghana Teachers' Certificate "A" qualification. She attended several training programmes on early childhood education. She had previously taught in Cameroon and Nigeria where she used the American curriculum guide in teaching and she is also proficient in French. Before she came to the KNUST Nursery School, she had taught at the University of Cape Coast Nursery School for four years. She has had

opportunity to participate in workshops and seminars organized by the Ghana Education Service which took place during long vacations and sometimes lasted three days or a week. She alluded that the seminars were most of the times organized for both public and private pre-schools in Kumasi. Besides, the University Basic Schools also organize training workshops aimed at updating the knowledge and experiences of the teachers in order to improve their output.

Like the KG teacher at Ayigya, the GES teaching syllabus and Teacher's handbook are the University KG teacher's primary sources of teaching materials. She sometimes on her own buys teaching and learning materials for her lessons. Unlike the teacher in Ayigya MA, she had two assistants who help with class control, the sharing of meals and attending to the personal hygiene needs of the children. Plate 4.12 shows the KNUST KG teacher at work.



Plate 4.12 Teacher at KNUST Nursery using flash card during lesson on letter K

4.6 Criteria for enrollment

Admissions at the Ayigya MA Nursery School are mostly done at the beginning of the academic year, although there are sometimes exceptions. The criteria for enrollment is for parents of children to pick and fill admission forms at a fee of GH¢5 and also meet the minimum age of entry which is three years. However, some of the children were found to be less than three years and as the class teacher explained, this happens mostly because of the non-availability of a public crèche in the Ayigya Zongo community to take such children and nurture them until they are grown enough for KG1. She said the School Feeding Programme that is available to provide some meals the school attracts many underage children to the school.

At the KNUST Nursery school, parents who wish to enroll their of children apply to the Admissions Committee of the University Basic Schools Management Board by purchasing an admissions form which they fill and return for processing at the end of May of the ensuing academic year. Although admissions are done once a year, children of the University's academic staff have the privilege of being admitted any time of the year if they are returning from overseas or joining the university from children elsewhere. Children eligible for admission must be certified healthy.

4.7 Curriculum used in Ayigya MA and KNUST Nursery Schools

Children, according to the Ministry of Education's curriculum for kindergarten, enter school at age four with tremendous informal experiences which calls on the teacher to create favourable conditions to consolidate and expand these experiences for the good of the child (Curriculum Research and Development Division, 2006).

The Ayigya MA Nursery School

Teaching and learning in the Ayigya MA Nursery relies on curriculum developed by the Curriculum Research and Development Division of the Ghana Education Service (GES) and a teacher's workbook that guides the delivery of the syllabus. The syllabus is provided through the Metro Office of GES in Kumasi who have direct responsibility for supervising the delivery of the syllabus. Within the period of this research, the team of supervisors visited the school where they had a meeting with the teachers and checked their lesson notes and attendance reports

SUGGESTED TIME TABLE FOR PRE - SCHOOL												
NAME OF SCHOOL: _____							CLASS / FORM: _____					
TIME	7:30	8:00	8:15 - 8:45	8:45 9:15	9:15 - 10:15	10:15 - 10:45	10:45 - 12:00	12:00 1:00	1:00 - 1:30	1:30 2:15	2:15 2:30	
DURATION	30	15	30	30	60	30	90	60	30	45	15	
MONDAY			MATHS		LANGUAGE & LITERACY				ENVIRONMENTAL STUDIES			
TUESDAY			MATHS		LANGUAGE & LITERACY				ENVIRONMENTAL STUDIES			
WEDNESDAY			MATHS		LANGUAGE & LITERACY				CREATIVE ACTIVITIES (ARTS)			
THURSDAY			MATHS		LANGUAGE & LITERACY				ENVIRONMENTAL STUDIES			
FRIDAY			MUSIC & MOVEMENT		LANGUAGE & LITERACY		PHYSICAL DEVELOPMENT		CREATIVE ACTIVITIES (ARTS)			
ARRIVAL AND PLAY ASSEMBLY												
SNACK												
OUTDOOR GAMES												
LUNCH												
SLEEP AND REST												
CLOSING												

Plate 4.21 Timetable of Ayigya MA Nursery School

The curriculum prescribed by the GES is run with a specified timetable that clearly outlines what is done during the school day.

Arrival and play time is from 7:00am to 8:00am followed by assembly for about 15 minutes. From Monday to Thursday, the children learn Maths from 8:15am to 8:45am, followed by Language and Literacy which is taught from Monday to Friday between 9:15 and 10:45 am. Between 10:45am to 12:00pm each day, the children go for outdoor games but for Fridays, they undertake Physical Development. Between 12:00pm to 1:00pm each day, the children take their lunch which is supplied by the National School Feeding Programme. On contingency basis, the teacher and the support staff share the meals some minutes on its arrival because the children occasionally are too anticipatory of the meal to wait patiently for it. Sometimes the meals arrive at about 11:45am. Between 1:00pm and 1:30 pm on Mondays, Tuesdays and Thursdays, the children learn Environmental Studies. At the same time on Wednesdays and Fridays, the children take lessons in Creative Activities. Sleep and rest periods are between 1:30 pm and 2:15 pm while pupils prepare to leave for home between 2:15 to 2:30pm throughout the week. On Fridays the school closes at 12:00 noon after lunch.

The KNUST Nursery School

The Curriculum used at the KNUST Nursery school is the same one supplied by the Ghana Education Service and used in the Ayigya MA Nursery School. The lessons taught are structured by a time table within which the curriculum is delivered. Lessons taught are sometimes integrated as most of the lessons relate to each other for example shapes and colours are taught together. Each lesson period has a duration of 30 minutes because children cannot concentrate for very long hours on one subject. English and Creative Arts however, have double periods with English having some time allotted to “News time” where the children are encouraged to tell about their

experiences during the weekend. Lessons are sometimes extended when children are involved in the activity of writing to enable them complete the exercise. The teacher gains the attention of the children during lessons through the use of “Hello”, “Hi”, “Kyekyekule” and other gestures and activities such as singing songs or reciting rhymes to bring back the interest of the children to the lesson. The school formerly made use of video as a teaching and learning material but due to the risk involved in carrying the TV set from class to class, the practice was stopped.

TIME TABLE- KINDERGATEN (1)

DAY	7 ⁰⁰ 8 ³⁰	8 ³⁰ 9 ⁰⁰	9 ⁰⁰ - 9 ¹⁵	9 ¹⁵ - 10 ⁰⁰	10 ⁰⁰ 10 ³⁰	10 ³⁰ 11 ⁰⁰	11 ⁰⁰ 11 ¹⁵	11 ¹⁵ - 11 ⁴⁵	11 ⁴⁵ - 12 ¹⁵	12 ¹⁵ 12 ³⁰		
			30	30	30	30	15	30	30	15		
MONDAY	ARRIVAL AND PLAY ASSEMBLY AND REGISTRATION		LANGUAGE & LITERACY			SNACK OUT DOOR GAMES- BREAK WASHING OF HANDS & REST		MATHS	ENVIRONMENTAL STUDIES (Building Healthy Individual)	DRESSING UP AND CLOSING LUNCH		
TUESDAY			LANGUAGE & LITERACY					MATHS	ENVIRONMENTAL STUDIES (Physical)			
WEDNESDAY			MUSIC AND MOVEMENT (The whole School)	LANGUAGE & LITERACY (Rhymes)	CREATIVE ACTIVITIES							
THURSDAY			MUSIC AND MOVEMENT	ENVIRONMENTAL STUDIES	MATHEMATICS							
FRIDAY			PHYSICAL DEVELOPMENT GAMES	LANGUAGE & LITERACY (Writing)	ENVIRONMENTAL STUDIES (Social)			LANGUAGE & LITERACY (Story Telling)				

Plate 4.22 Timetable used by the KNUST Nursery School

The timetable for KG1A of KNUST Nursery School (Plate 4.22) showing Language and Literacy (this period is used for News time where the children share events that engaged in and what they learned over the weekend especially at Church and at the Mosque) as major subjects; Maths, and Environmental Studies (it focuses on building a healthy individual) on Mondays and Physical development on Tuesday.

On Wednesday, they study Music and Movement (this is done by the whole school), Language and Literacy (rhymes) and Creative Activities from 11:15 am to 12:15. On Thursday, the children learn Music and Movement and Environmental Studies in the morning and Maths from 11:15 to 12:15 pm. On Fridays, the children dress in their P.E kits and take physical development games for about 30 minutes and followed by Language and Literacy (which is used for writing development). Environmental Studies is taught afterwards and the week ends with a lesson in Language and Literacy (story telling) at about 12:15pm.

Arrival to this school is between 7:30 to 8:30am each school day and between 8:30am and 9:00 am, there is Assembly and registration. At about 10:00 to 10:30 each day, the children take their snacks, followed by outdoor games, break and then washing of hands after break as the activities in the afternoon. At about 12: 15 to 12:30, the children dress up and prepare to leave for home. This is followed by lunch and for children whose parents cannot come for them at the closing time, the school has a policy where teachers and attendants stay behind to monitor them while they play or sleep at a fee before their parents or guardians arrive.

Notable differences in the timetables of Ayigya MA Nursery and KNUST Nursery Schools were that the timetable of Ayigya MA Nursery started its lessons at 8:15am ending officially at 2:30pm. The KNUST Nursery School on the other hand started its lessons at 9:00am and officially closing at 12:30pm.

It is necessary that children at the pre-school have a combination of intellectual skills, motivational qualities, and socioemotional skills inculcated in them. They need to be directed to develop themselves to understand the feelings of others, control their own feelings and behaviours in order to get along with their peers and teachers. Children need to be able to cooperate, follow directions, demonstrate self-

control, and be attentive and all these traits are inculcated in the pupils through structured lessons at the Ayigya MA and KNUST Nursery Schools (Boyd, Barnett, Bodrova, Leong, & Gomby, 2005).

4.8 Teaching Methods

Teachers of both schools to some degree have their lessons being art based which to have the potential to provide a powerful and productive experience. The art based method of delivering the curriculum enhances all aspects of the child's education including the neurological development, cognitive learning, and the psychosocial growth of the child (Mello, 2004). The actual curriculum employed by the Ayigya MA and KNUST Nursery Schools is an amalgamation of all the various curriculum perspectives with regard to the role of the learner in knowledge acquisition, the teacher's role of knowledge creation and facilitation, the methods of instruction and the overall approach to the curriculum as prescribed by the GES.

With reference to the approaches adopted by the teachers in their lessons, the Ayigya MA Nursery teacher is the source of ideas, facts and information the children receive except where the attendant takes the children through rhymes and also during her absence. She however, makes substantial reference to the Teacher's handbook and the syllabus supplied by the GES. The KNUST Nursery teacher sometimes selects the children to perform tasks during certain lessons such as 'pick and say' where the children are asked to pick and tell the class the name of a numeral or an alphabet they select randomly from a group of flash cards designed by the teacher.

The method of knowledge transmission and assessment adopted by both teachers revolved around the activities of teaching, pupil participation and enquiry. With KNUST Nursery, the children were more inquisitive and asked questions on

occasions that they wanted to relate the lesson to their everyday life. The children sometimes discovered new ways of doing everyday activities. An example was identified in a the lesson on tooth cleaning where all but one child knew that the plantain stock and charcoal are used as indigenous tooth cleaning materials. The children were very excited to try this out but for fear of soiling their clothes with the charcoal, the teacher requested that they make their parents demonstrate the process for them.

4.9 The Mode of Assessment

As prescribed by the GES curriculum, children are not to be formally assessed. The KNUST Nursery teacher alluded to the fact that she is not in support of formal assessment of the children. She states with reference to the GES curriculum that

...At this stage assessment must by informal as possible. Teachers must avoid the temptation of subjecting children's work to formal assessment that is examination. So here normally we don't do examination...At the end of the year, each teacher taking the children throughout year is able to see the capability of each child

As a form of assessing children's performance, the KNUST Nursery teacher uses variations of strokes that signify the correct sign or a smiling face in making the children know their performance as shown in Figure 4.1.

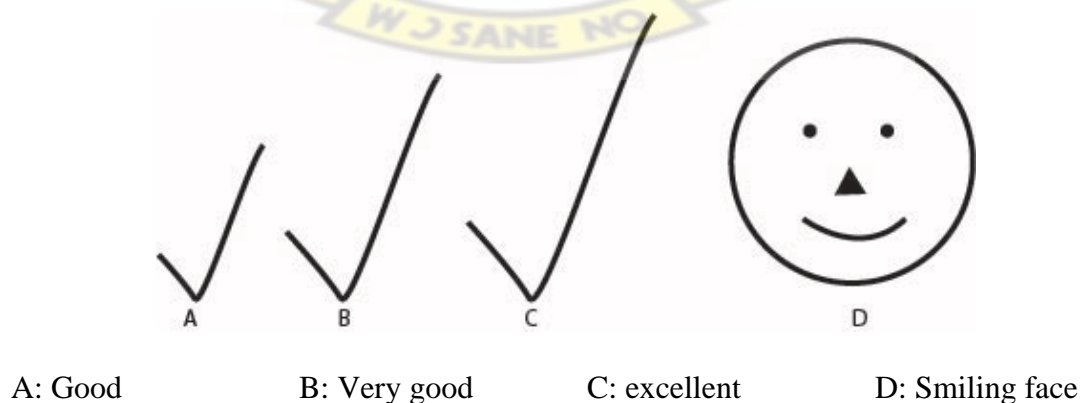


Figure 4.1 Assessment strokes used at the KNUST Nursery (KG1)

The KNUST Nursery teacher further stressed that these symbols encourage the children to put in their very best in lessons and assignments unlike awarding zero which may dampen their spirit. The smiling face (as shown in Figure 4.1) is awarded to children who do extraordinary work. She stated that her assessment technique was informed by a Chinese educational policy of assessment which encourages the use of strokes (correct) rather than the wrong sign (x) to encourage children. She also gives out toffees, biscuits, hug, and handshakes to encourage children to learn and share their knowledge in class.

Comparatively, the teacher at the Ayigya MA Nursery school writes “Seen” under the correct sign when making assignments given to a child who had done what is expected (as shown in Plate 4.23). Exercises not done well are erased and the children made to redo or rewrite the exercise. When asked she gathers feedback from her pupils, the teacher at Ayigya MA noted as a feedback on lessons taught, she is assured through pupils’ ability to orally repeat what is taught and through writing.

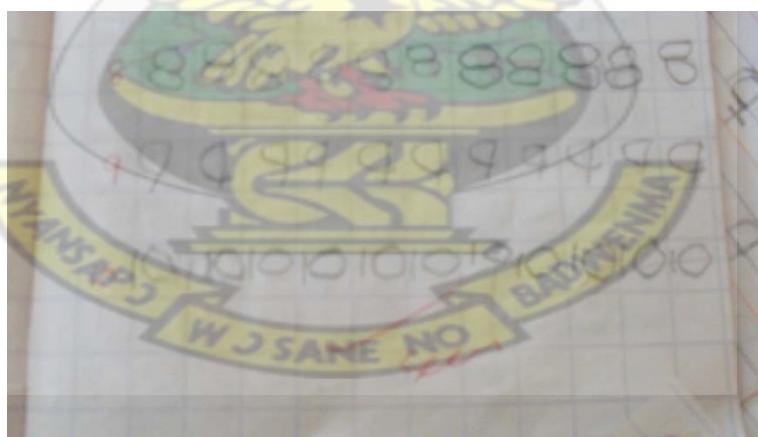


Plate 4.23 Teacher’s assessment of an exercise (Ayigya MA Nursery School)

4.10 The resources available in the pre-schools

Teachers Handbook: The Teachers’ Hand book used in Ayigya MA Nursery School is supplied by the GES as accompaniment for the curriculum and other auxiliary

materials such as story books and teaching aids (see Plate 4.24). The KNUST Nursery school teacher did not use the Teachers' Hand book but only the syllabus and textbooks available for each lesson.



Plate 4.24 Teacher's Guide and Story Book used at the Ayigya MA Nursery School

Wall charts: Both nursery schools have wall charts (see Plates 4.25a and 4.27) that are used as teaching and learning materials.



Plate 4.25a Wall charts displayed in the Ayigya MA classroom



Plate 4.25b TLMs on walls (murals and posters)

Additional resources at the Ayigya School are murals that have been painted on the both inside and outside of the classroom wall and some wall charts. There were 22 wall charts that included a calendar. Some of the wall notices had labels depicted in both English and Twi that described items.



Plate 4.26 Labels on classroom items (both in English and Twi)

The KNUST Nursery school has murals and wall charts and hangings (Plates 4.27 and 4.28) that should constantly engage the minds of the children as they look around the classroom. The wall charts vary from laminated cards, plastic charts, wooden hangings and exceptional artworks done by the pupils.



Plate 4.27 Illustrated Alphabets on wood at the KNUST Nursery School



Plate 4.28 Illustrated Numerals and Alphabets at the KNUST Nursery School

The wall charts observed contained both illustrated and unillustrated alphabets, and numerals and activities that teach cleanliness, good morals and etiquette. Some of the flashcards and charts (as shown in plate 4.29) were commissioned products of the GES Resource Centre.



Plate 4.29 Flash cards used at the KNUST Nursery School

Textbooks and Exercise books: In KNUST Nursery school, all the children have all the prescribed books for all the lessons taught except for physical education which is taught through practical activities. Books used are from both local and foreign publishers. The books are stored in cupboards under lock. Although the GES supplies Maths and English books, the school had not received these at the time of the study. Teachers at KNUST Nursery school sometimes recommend books for use in the classrooms. The school supplies the children exercise books, pencils, erasers and crayons. The total cost of books at KG1 is GH¢ 29. To the KNUST Nursery teacher, textbooks used are very convenient and serve the purposes for which they are acquired because it tallies with the syllabus and its illustrations are very familiar to the children.

In Contrast, exercise books used at the Ayigya MA School are not supplied by the school. Text books and stories books as well as play items are supplied.

Games: At the KNUST Nursery school, the children make use of play things available in the school's playground at break and play times. These include skipping ropes, balls, toys, sacks and other play equipment as shown in Plate 4.30.



Plate 4.30 KNUST Nursery School playground

As the children play, there are attendants who help control the play and settle conflicts that may arise from their play. These attendants also comfort the children and attend to them when they get hurt.



Plate 4.31 KNUST Nursery children during play time

The Ayigya MA Nursery School on the other hand does not have any game equipment except for a play box. Children however, engage in their own play on the school's compound with the boys mostly playing football and the girls, "Ampe", a traditional jump and number game.



Plate 4.32 Children during playtime at the Ayigya MA School



Plate 4.33 A playground close to the Nursery Block of Ayigya MA Nursery School

Furniture

Unlike the KNUST school where the children sit on chairs made to size and table, their peers in Ayigya use long benches as chairs and tables as seen in Plate 4.34.



Plate 4.34 Benches used as seats and tables at the Ayigya MA Nursery School



Plate 4.35 Furniture used by children at the KNUST Nursery School

4.11 How teachers use available Teaching and Learning materials to deliver the pre-school curriculum

In Ayigya MA Nursery School, the teacher and the attendant use wall charts as teaching aids to reinforce the lesson or academic activity. On one occasion, she pointed out words on a wall chart titled Teacher (Plate 4.36) for the children to repeat the words after her as a rhyme.

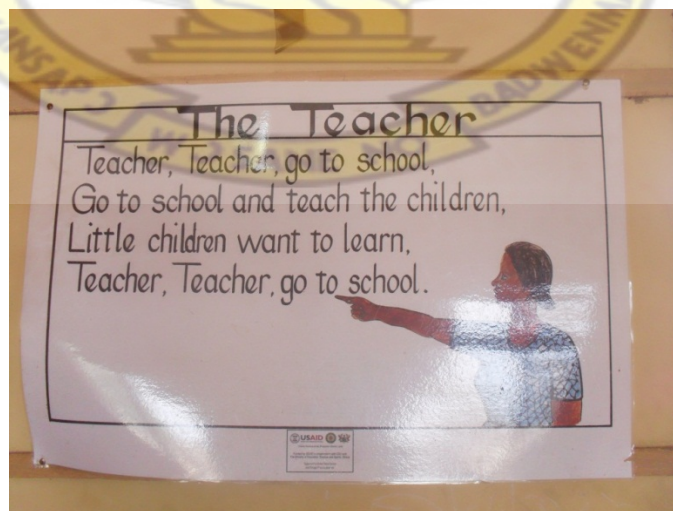


Plate 4.36 Poster of a rhyme at the Ayigya Nursery School

In a lessons in literacy, the teacher engaged the children in conversation and asked them to draw what they understood from stories read in a book, the teacher also illustrated scenes in the story as the lesson went on to foster understanding and make real the abstract information provided the children.



Plate 4.37 Nursery teacher teaching a lesson on market activities at the Ayigya MA School



Plate 4.38 Children identifying scenes from a story at the Ayigya MA Nursery



Plate 4.39 Teacher's Guide and Story books used in Ayigya MA Nursery School

The teacher in KNUST Nursery 1A also makes profound use of teaching and learning materials available to her. She uses them when convenient to her lesson. Teaching aids mostly used were created from training workshops and conferences attended by the teacher. When asked why she uses teaching and learning materials to deliver the syllabus, the teacher acknowledged the difficulty of teaching at the KG level without TLMs usage of which she said enhances understanding and makes lessons very practical. She incorporates the use of origami in her assignments to create fun in her teaching.



Plate 4.40 Origami employed in lessons

In one lesson on cleaning of the teeth on the topic everyday activities, the teacher employed actual tooth brushes, toothpaste and other mouth cleaning items which the children brought to school so she could demonstrate to them the proper way of brushing the teeth. In this lesson, she demonstrated the process of cleaning the teeth with each item beginning with the toothbrush and then gave the toothpaste and brushes to the children to try them on their own. The attendant also helped the children in this activity. Some of the children looked on in great awe during the demonstration by the teacher.

The teachers also demonstrated the use of traditional chewing sponge, stick, conventional toothbrush, tooth flush, mouthwash, plantain combs with charcoal, moringa and guava herbal sticks to the children. As a preventive measure against exchange brushes and toothpastes brought by the children were labelled with their names. Generally, the children were very much interested in the activity of tooth brushing and exhibited signs that communicated a sense of not being in a formal academic facility but just learning everyday life skill through play with friends. They

used all of the items except the plantain and charcoal which the teacher requested them to seek the help of their parents and guardians because it could soil their clothes easily. This activity was found to be very cognitively stimulating and engaging for the children and also demonstrated the teacher's competences in delivering the lesson using the most appropriate TLMs.

The KNUST KG1A teacher also had a blackboard (chalkboard) and a whiteboard which had recently been fixed in the classroom because the school found the chalkboard a health hazard (Opoku-Asare, 2009) because it produces chalk dust which may cause nose or eye irritations. It can also dirty the clothing of the teacher unlike the white board which uses a water based marker that produces no dust.

4.12 The cognitive and social impact of pre-school education on the child

The extent of inequality between Ayigya MA and KNUST Nursery schools may make it very difficult to determine the cognitive and social impact on the life of the children. This is seen through the differences in family background, resources available to the child at home and in school, the teachers' professional experience and school facilities, nutrition and health care resources available to them. The literature cites that high quality early childhood education can improve children's cognitive and language development, their long-term academic achievement, special education placement and grade retention (World Bank, 2001). To assess the cognitive and social impact of the curriculum on the education of children in the two pre-schools studied, the researcher conducted a written test to ascertain the comprehension of the children. Although the cognitive impact of school education is very vital and in most instances impressive to parents, other considerations need to be given attention when assessing the impact of pre-school education on the life of a child. This has been categorically

emphasized by the National Institute for Early Education Research (2005) in their statement

Knowing the ABCs is not enough. To be prepared for school, children also must be excited and curious about learning and confident that they can succeed (motivational qualities). They must be able to understand the feelings of others, control their own feelings and behaviors, and get along with their peers and teachers (socioemotional skills). (Boyd et al., 2005)

In answering the questions on the social impact of pre-school experiences, the KNUST teacher emphasized that the children acquire experiences in school through interactions with their peers and teachers. She recounted how children who are without water closet toilet facilities at home learn how to use them in school. The children are also taught the numerals and alphabets and certain foundational lessons that make it easy for them to access primary education and for their teachers to teach them when they move to KG2.

Developmentally, children's social interactions change radically and their relationships increase in number and variety (Ross & Spielmacher, 2005). The social impact within this context falls in the domain of children's interactions with their close relations, the teacher and communication among the children. Pre-school therefore provides opportunity to socialize the children to engage the society in positive ways.

Cognitive impact

In achieving the objective of assessing the cognitive impact of pre-school education on the children, the researcher conducted a test for the children to write the alphabets and the numerals which formed the fundamentals of KG1 lessons. However, both schools had not taught all the alphabets but had taught the numerals up

to 10. The test involved the children being instructed by their teachers to write within 30 to 45 minutes, all the alphabets and numerals they had learned on a plain sheet of paper. Inaccurate letters were anticipated because the children are used to writing in their exercise books which had guiding strokes of the numerals and alphabets to remind them of the letters and numbers required for the exercises.

To assess the cognitive impact of pre-school experiences, a test based on the goal of helping the children develop numeracy and literacy skills or competencies was conducted in both schools. Ayigya MA Nursery School presented 12 children who could write for the test but in KNUST Nursery, all the children present undertook the test. Only 30 entries were however recorded from KNUST Nursery because not all of pupils submitted their test papers, some pupils were also absent from school that day. In terms of recognizing and writing the English alphabet, Figures 4.2 and 4.3 show how the two sets of pupils fared in the test.

Alphabets:

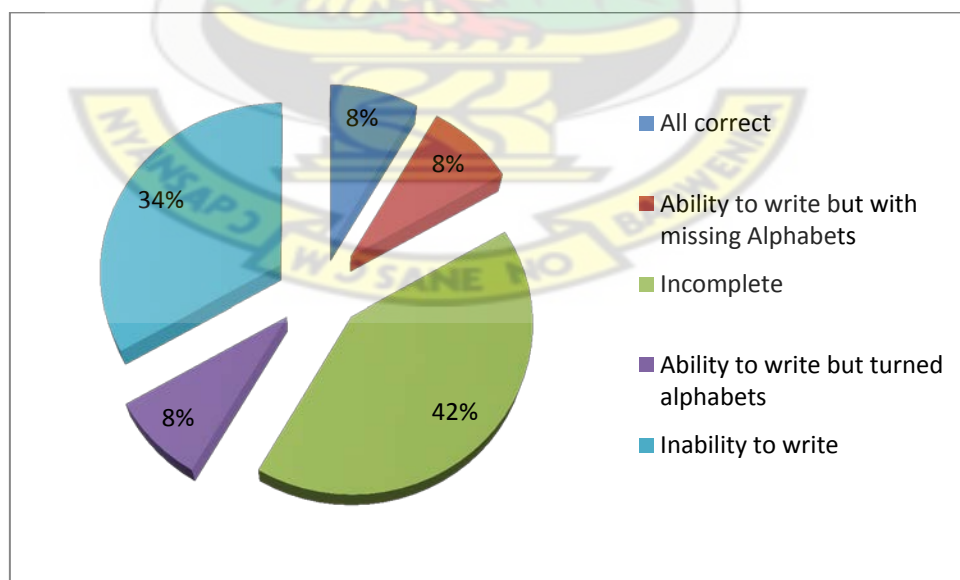


Figure 4.2 Test on Alphabets on Ayigya Nursery School

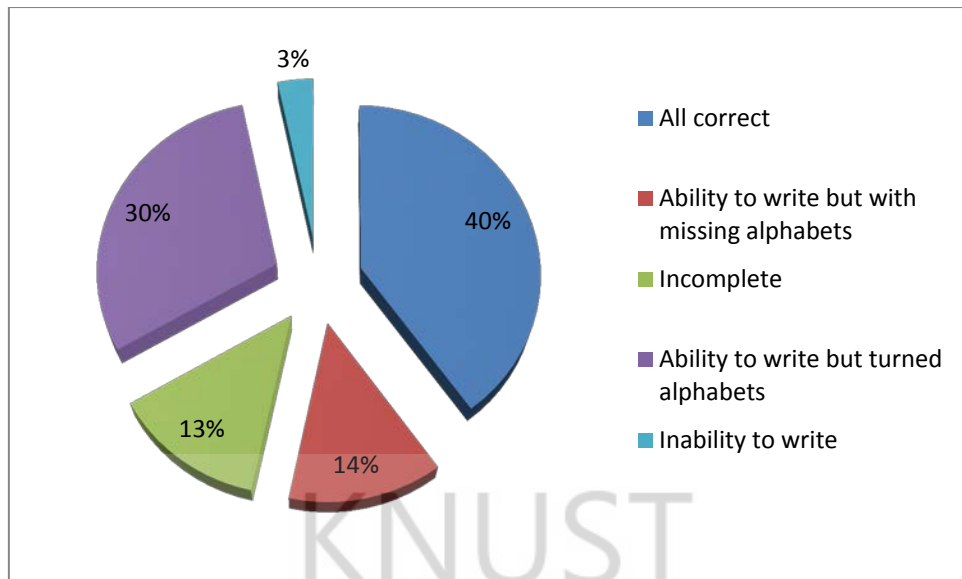


Figure 4.3 Test on Alphabets on KNUST Nursery school

The pie chart shows that in KNUST Nursery, 40% of the pupils as against 8% of the number of children in Ayigya were able to write the full set of the English Alphabets from A to Z correctly. Those who were unable to write the 26 alphabets constituted 34% in Ayigya as against 3% in the KNUST School. The disparity is very wide.

In terms of competency in writing the numbers 1-10 correctly and sequentially, only 25% of the 12 pupils in Ayigya could do this as compared to 44% of the 30 pupils in KNUST. On the other hand 8% in Ayigya and 3% of children in KNUST respectively could write 1-5 correctly (see Figures 4.4 and 4.5).

Numerals:

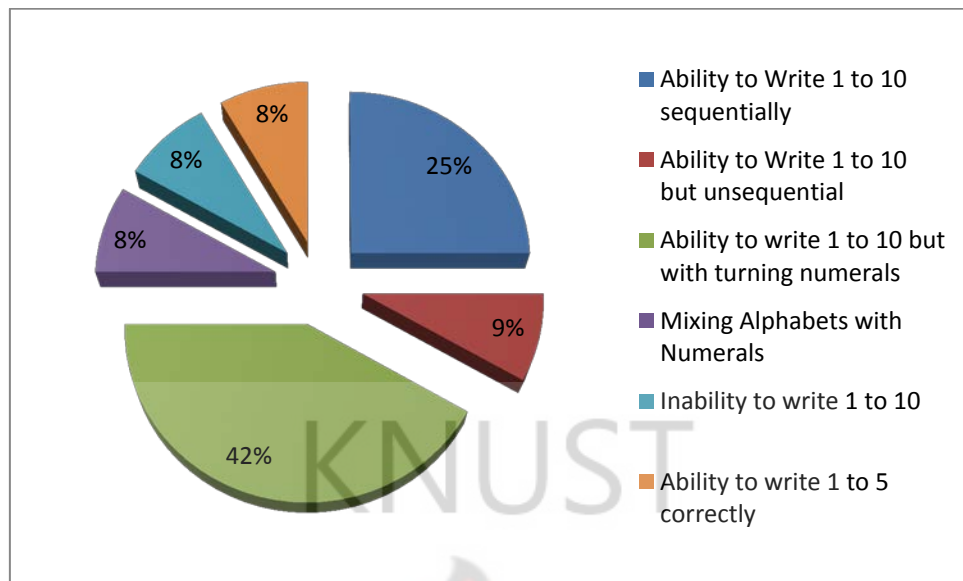


Figure 4.4 Test on Numerals on Ayigya Nursery school

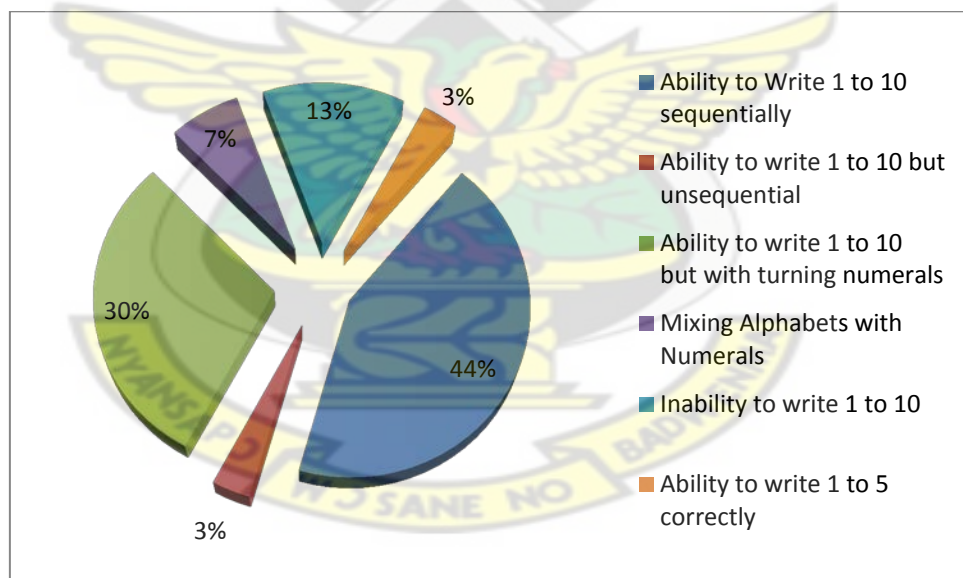


Figure 4.5 Test on Numerals on KNUST Nursery school

The disparity between ability to write in Ayigya MA Nursery and KNUST schools is however not too wide (8% and 7%) with regard to those who mixed up numbers and letters.

Irrespective of the scores attained in the two schools, some children from both nursery schools exhibited writing challenges with the numerals and alphabets, which are typical of children at that age who have only begun to write. Some of the challenges are illustrated in Plates 4.41- 4.45, which show lack of skill, sequence, mix up and reversal of figures from the normal position.

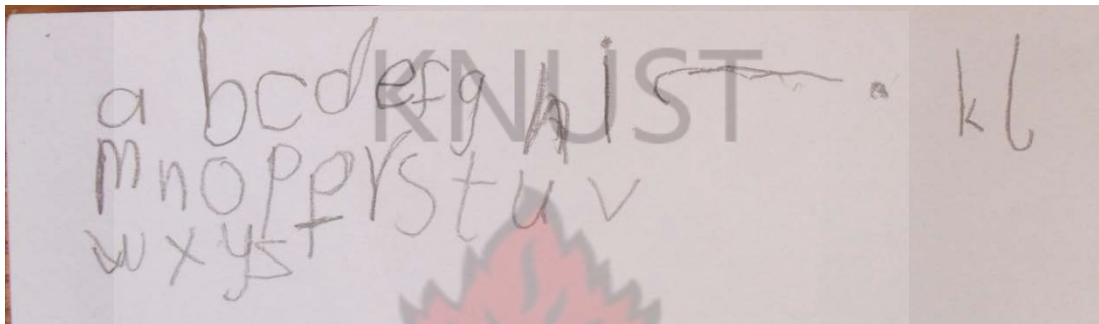


Plate 4.41 Sequential writing of the alphabets but with turning letters (j and z)

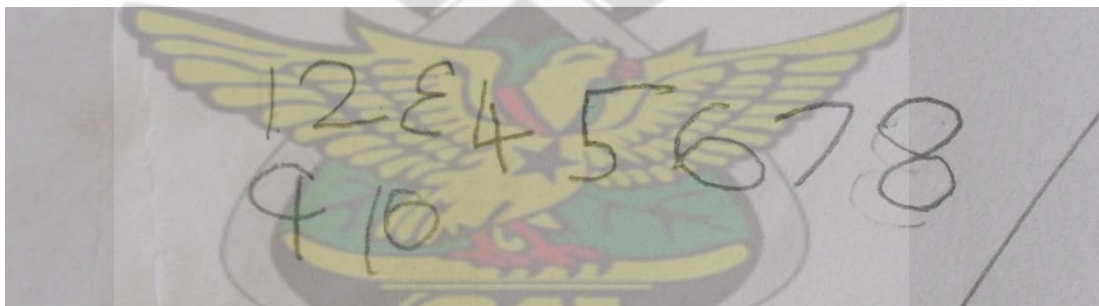


Plate 4.42 Sequential writing of the numerals (1 to 10) but with turning figures (number 3)

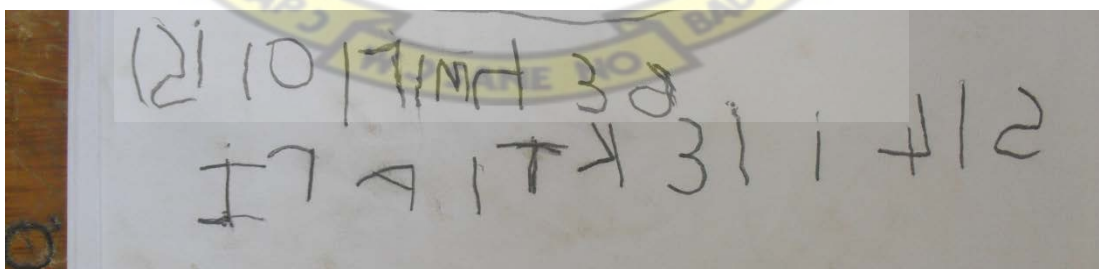


Plate 4.43 Complete mixing of alphabets and numerals

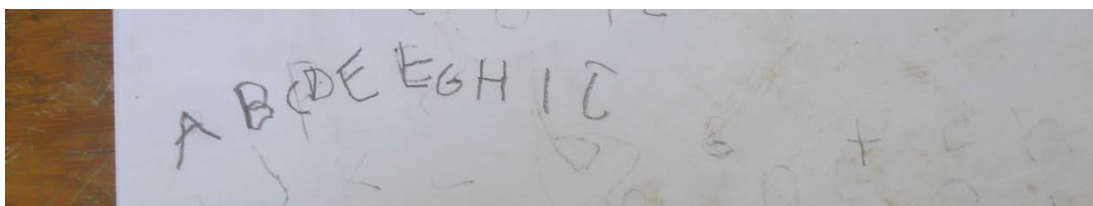


Plate 4.44 Incomplete writing of the English Alphabets

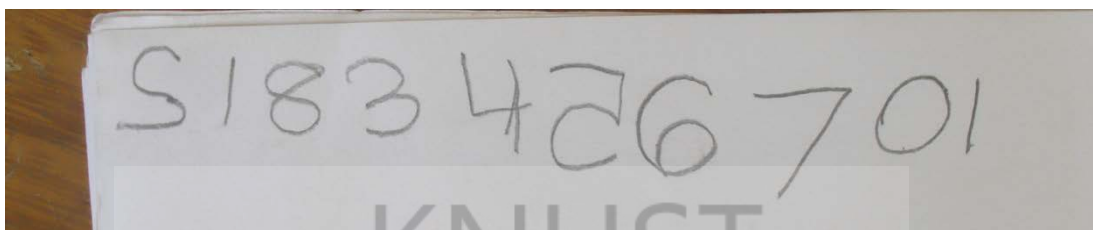


Plate 4.45 Complete mixing and turning of the numerals

The writing challenges may be a reflection of the different teaching strategies adopted by the two teachers, the display of alphabets (both illustrated and written), homework done with parental support particularly in the case of KNUST Nursery children. The writings exhibited could also be a reflection of the inappropriate type and nature of furniture used by the children in Ayigya MA Nursery School as shown in Plate 4.11.

Social impact

Children develop both social interaction skills particular to peer interaction and construct social relationships. When children are within a group, the social interactions and relationships created become the basis of their understanding and practices and a base also for the child's individual development through conversations and games that they play. The experiences gathered by children within their numerous memberships in peer groups is a reflection of their social relationships and of practices within the peer groups that experts assume influences children's individual orientations to the social world throughout life (Howes & Linda, 2006).

Children at the Ayigya MA Nursery in their constructed social relationships are very interactive which may be as a result of the clustered nature of their sitting

arrangement in class. Although there are three rows of seats in the classroom, the children on most occasions prefer to sit with their age mates of similar body size and possibly fantasies. Within the group of children, there was often a leader who directed the pace of every activity be it play, learning or conversation while the remaining members imitated him or her or cheered them up.

Children at Ayigya MA Nursery school were very aggressive towards their peers as compared to children at the KNUST Nursery school. This behaviour, per the explanation given by their teacher, is due to the social background of living in a zongo community where some level of relative violence is experienced among the large ethnically diverse population in the community unlike the peaceful and quite campus life majority of the KNUST Nursery School have grown up with. Children at the KNUST School occasionally fought but, most of them often report such incidents to the teacher or inform her of their grievances with their peers. They also reported anyone caught in wrong doing. This is likely to reflect the high level of trust and confidence the KNUST children have in the teacher with respect to fairness, justice, discipline and approachable nature which restrains the children from fighting each other during disagreements.

4.13 The School Feeding Programme

One objective of pre-school education is the promotion of the nutrition and health status of the child. As these factors ultimately have an effect on the academic performance of the child. The KNUST Nursery school is not a beneficiary of the National School Feeding Programme so the school provides the children with food that their parents pay for. The meals are served at about 10:30 am. At lunch time, the

children eat meals they had brought from home under the supervision of the teacher and the attendants.

Ayigya MA is a beneficiary of the School Feeding Programme (SFP) so the children enjoy a free lunch daily. Meals served by the SFP are local foods and the children are familiar with which range from rice and tomato stew, beans stew and garito, waakye (mixture of rice and white beans) etc. It is very worthy to note the joy on the faces of the children upon the arrival of the meals at lunch time. On most occasions, they cheered themselves with “Canteen aba” meaning the canteen has arrived, with some children hugging each other.

4.14 Challenges to education in Ayigya MA and KNUST Nursery Schools

Although KNUST Nursery school is a private pre-school facility and Ayigya MA Nursery School is public, both schools face challenges that when addressed could improve teaching and learning. Because government funded Nurseries are seemingly tuition fee free, most of the children’s parents at the Ayigya MA feel very reluctant paying for anything that may contribute to the education of their children. Some parents feel reluctant to pay for canteen fee of GH¢0.50, buy school uniforms and pay monies for certain items such as stationery that are not provided by the government.

The school lacks child friendly furniture (tables, chairs, cupboard) so children at the Ayigya MA Nursery School sit and write on benches that are not comfortable and make it difficult for the children to study as individuals.



Plate 4.46 A view of the Ayigya MA KG1 classroom

The school also lacks of the kind of playground resources needed to foster play and interaction among the children. Most of the time, the children are confined to the walls of the classroom which gives them little space to play and therefore breeds boredom from the limited of variety of games. A well-resourced playground could therefore play a major role in the play life of the children relieving them of stress and boredom (Community Playthings, 2009).

Another challenge to effective teaching and learning is the high level of truancy among the children of Ayigya MA Nursery School. Children at the school are sometimes taken away on long journeys by their parents and guardians making them lose part of studies. This issue of truancy, the teacher explained results in inequalities in the knowledge levels of children at the pre-school and sometimes draws lessons

back because they have to cater for the deficiency in foundational lessons missed by the children to help them cope with new lessons.

There is also no electricity to light up the Nursery block; when the classroom becomes dark, lessons are impeded. They can also not use any electrical gadget such as fans to cool the classrooms, making the school rely on the natural breeze to ventilate the room in warm conditions.

Unlike the Ayigya School, the only noticeable challenge of KNUST Nursery school is unpainted walls both within and outside of the classroom. Painting could enhance the ambience of the classrooms and make it more pleasant for the children to enjoy being there.



Plate 4.47 A view (entrance and classroom) of the KNUST KG1 A

In conclusion, Ayigya and KNUST Nursery schools used the same syllabus as supplied by the GES but employed different textbooks, approaches and timetable structure in delivering its content. Subject taught in both schools are the same comprising Language and literacy, Environmental studies, Mathematics, Creative

Activities (music, dance and Art) and Physical Development Games. However, official closing time for the two schools differed with Ayigya MA School closed at 2:15pm whiles KNUST School closed at 12:15pm.

Ayigya MA and KNUST Nursery schools both used teaching and learning materials such as wall charts, murals, games, posters and textbooks in teaching. The Teachers' Handbook by the teacher in Ayigya MA Nursery and the laminated flash cards, plastic charts, wooden hangings and artworks by pupils in KNUST were the major differences. Additionally, KNUST Nursery had a well-resourced playground than that of Ayigya MA School. It was also found that while pupils of KNUST Nursery used sizeable and child friendly furniture, their peers at Ayigya used long benches as tables and chairs for their academic work. Teachers in both schools also used personal hand drawings on the board (chalkboard and white board) to reinforce their lessons.

In assessing the cognitive readiness of the pupils in both schools, a written test was conducted to ascertain their comprehension of English alphabet and numerals. Data gathered revealed that pupils who were able to write the full set of the 26 English alphabets constituted 8% in Ayigya MA School as against 40% in KNUST Nursery School. 25% of pupils in Ayigya MA School were however able to write numbers 1 to 10 sequentially as against 44% in KNUST Nursery School. Irrespective of the scores attained, some children from both nursery schools exhibited writing challenges which is typical of children at that age and who have only begun to write.

Pupils at Ayigya MA Nursery School although were sociable and communicated to their teacher, they were aggressive towards their peers as compared to pupils at the KNUST Nursery School who rather reported incidents of wrong doing

to their teacher. Pupils of both schools also learned some social skills through the use of facilities and lessons in their respective schools providing the opportunity for them to socialize and better engage their societies positively.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

5.1 Summary

In line with the objective to investigate how the Ghana pre-school curriculum is delivered in public and private pre-schools led to a study of two schools in the Oforikrom Sub-metro of the Ghana Education Service in Kumasi. The purpose for the study was to find out whether the children who are expected to benefit from this development goal are being given similar foundational developmental training and care to ensure a uniform social and cognitive preparation for formal education in primary class one. The case study approach was adopted using observation and interview as data gathering tools to document the findings. Within the two schools, one KG1 class was chosen for the study. The study revealed disparities in the provision of early childhood education within the Oforikrom Sub-metro in terms of teacher expertise and experience, exposure to early childhood training and workshops, requisite classroom facilities and resources such as chairs, tables, fans, admission requirements, school fees, play facilities, security, access to child friendly atmosphere, uniforms. Others included social differences like children's cleanliness and healthcare which are mostly relative to the family background, economic and social status of the children.

Despite these differences, the observation and interviews revealed that most children of both pre-schools exhibited curiosity, sociability, interactivity, ability to make requests and respond to instructions from their teachers and the support staff. Nevertheless, children in the KNUST Nursery school exhibited the most confidence and proficiency in the English language. This is informed by the relatively better social and educational backgrounds of their parents and the community and school

where they find themselves. In Ayigya MA nursery school some of the children looked malnourished and unkempt. Some of the children had their hair uncombed, uniforms torn and not the prescribed type and unclean even at the first day of the week. The study found that the children's parents had financial problems which prevent them from providing school materials. They rather hand down uniforms of older siblings to the younger children even though that may not be the school's official uniform. Unlike KNUST Nursery, all but one child in Ayigya Nursery comes to school with a school bag.

This sharp contrast in the accommodation available to the two schools studied, the delivery of the curriculum that are supplied to both schools by the Ghana Education Service, available textbooks to the schools and other play resources attest to differences in the experiences that children in both schools have although the content of the curriculum is the same. The results of the test conducted to assess the level of understanding among the children in alphabets and numerals had KNUST Nursery scoring higher than their peers in Ayigya MA Nursery School. This disparity is likely to be carried into formal education if no intervention is implemented to help the children.

The test also showed that some pupils from both schools have writing deficiency even at that level. In the case of pupils of Ayigya MA Nursery, this writing difficulty could primarily be the result of inappropriate furniture that makes it difficult for the children to sit upright when writing. Perhaps this could change when they have better and child friendly chairs and tables to use. The teacher could the restart the children by giving them exercises that would enable them write well and reach the right standard.

The fact that 40% of the 30 KNUST Nursery pupils and just 8% of the 12 pupils in Ayigya MA Nursery were able to write the full set of the English Alphabet (A to Z) while in the writing of numerals, 25% of 12 pupils of Ayigya MA Nursery as against 44% of the KNUST Nursery were able to write correctly from 1 to 10 reinforces the vast differences that exist between the performance of both sets of children. This call for action on the part of the GES and more research to ensure all children in Ghana have equal opportunity for formal education.

5.2 Conclusions

Enhancing the quality of young children's lives is now a national and international priority, expressed through research and policy initiatives, programme development and advocacy (Woodhead, 2007). Although this study have brought to light several areas of pre-school education that must be researched so that the findings could be applied to enhance early childhood education provision as a national priority. The benefits children could gain in pre-schools are immense and Ghana stands to reap the benefits cited by Magnuson et al (2004) in particular could be attained through interventions such as listed by Woodhead (2007). Notable areas of further study are:

1. The impact of the school feeding programme in public schools could be further researched so Government extends the intervention to other public kindergartens to encourage and maintain attendance.
2. The need for the children to develop effective writing skills and the effective writing techniques that teachers could use in their lessons to guide and raise the children's standard of writing.

The main findings of the study are listed according to the research objectives as follows:

1. Objective One: To identify and describe the curriculum used in the two schools. The curriculum used in both schools were the same one supplied by the Ghana Education Service but disparities exist in the curriculum delivery in both schools. This is due to differences in school environment, teachers' experience and expertise, health and nutrition status of the children, access to funding, textbooks and other educational materials.
2. Objective Two: To identify academic resources available and how teachers use them to teach lessons. Ayigya MA and KNUST Nursery schools both used teaching and learning materials such as wall charts, murals, games, posters and textbooks in teaching. The Teachers' Handbook by the teacher in Ayigya MA Nursery and the laminated flash cards, plastic charts, wooden hangings and artworks by pupils in KNUST were the major differences. Additionally, KNUST Nursery had a well-resourced playground than that of Ayigya MA School. It was also found that while pupils of KNUST Nursery used sizeable and child friendly furniture, their peers at Ayigya used long benches as tables and chairs for their academic work. Teachers in both schools also used personal hand drawings on the board (chalkboard and white board) to reinforce their lessons.
3. Objective Three: To assess the cognitive and social impact of preschool education on the children's readiness for Primary One entry. In assessing the cognitive readiness of the pupils in both schools, a written test was conducted to ascertain their comprehension of English alphabet and numerals. Data gathered revealed that pupils who were able to write the full set of the 26

English alphabets constituted 8% in Ayigya MA School as against 40% in KNUST Nursery School. 25% of pupils in Ayigya MA School were however able to write numbers 1 to 10 sequentially as against 44% in KNUST Nursery School. Irrespective of the scores attained, some children from both nursery schools exhibited writing challenges which is typical of children at that age and who have only begun to write. There is also the need to deal with any difficulties in comprehension with regards to the children's knowledge of the alphabet and numerals. However, their performance in the test does not reflect attainment of the full cognitive competencies of the children.

Pupils at Ayigya MA Nursery School although were sociable and communicated to their teacher, they were aggressive towards their peers as compared to pupils at the KNUST Nursery School who rather reported incidents of wrong doing to their teacher. Pupils of both schools also learned some social skills through the use of facilities and lessons in their respective schools providing the opportunity for them to socialize and better engage their societies positively. The study also reveals that some children in the two schools need attention with regards to writing which forms a greater part of their academic activity. Such children need special attention to overcome this difficulty.

4. Government's school feeding programme can directly reduce truancy although there are concerns about its sustenance and the quality of meals.

5.3 Recommendations

1. There should be verification in the form of further research in other pre-schools on the results collected and presented in this study. This will help to examine the effect that curriculum inequalities at the pre-school level affect Ghana's educational system and how teachers use available teaching and learning material at their disposal to deliver the curriculum.
2. Workshops and seminars could be organized by the Oforikrom District Sub-metro for teachers to keep them abreast with trends in teaching, assessment and class management.
3. In Ayigya MA Nursery School, the GES could provide a well-resourced playground and set of classroom furniture to make pupils comfortable for academic work.
4. The GES could provide Ayigya MA with a crèche in order to give early care and nurturing to children below the age of three and supply adequate textbooks and learning materials. The Ghana Education Service could also make play facilities part of the provision of early childhood education for pupils to play and learn in all schools.
5. The Ayigya MA and KNUST Nursery schools could be refurbished by the school authorities to enhance the ambience of the classrooms and make them more pleasant for the children to enjoy their education.

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Appendix

INTERVIEW GUIDE

Background of the teacher

What are your academic qualifications?

How many years have you been in the business of teaching?

How many years have you taught in kindergarten?

How many years have you taught at this very level of kindergarten?

Do you have other experiences such as seminars, conferences, access to early childhood research information etc.?

Background of learners

What is the average age of this class?

What is their family background?

What are the criteria for enrolment?

What is the health status of the children?

What are the languages spoken by the children?

What are the best learning styles of the children?

Are there other anticipated and unanticipated experiences that the children encounter?

Assessment

How are children assessed?

What criteria are used to assess children?

Objective one

What curriculum (content) do you use in your class?

What is the source of your curriculum content?

What Subjects do you teach?

What are the sources of Books and teaching and learning materials used?

What languages are used for instruction?

Objective two

What are the resources available to you in your teaching?

Do you have enough books, charts, furniture etc.?

What is the quantity of books, charts and furniture available?

Are the books foreign or locally produced?

How are the books and other teaching and learning materials stored?

Are the books very convenient to use?

Do the books and other teaching and learning materials serve the purposes for which they were procured?

Are the contents of the books and other teaching and learning materials appropriate for the children?

Do you have washing bowls, toilets and urinal facilities, drinking water and access to the school feeding programme?

Objective three

What is the duration of each lesson?

How are teaching and learning materials used?

Are the teaching and learning materials appropriate for the lesson?

How do you gain the attention of the children during lessons?

Do you use digital media as a form of teaching and learning materials?

Objective four

What social and cognitive impact do the experiences in this school have on the children in your class?