THE USE OF KINAESTHETIC ACTIVITIES AS ART THERAPY TOOLS TO IMPROVE PERFORMANCE IN PRE-READING AND PRE-WRITING AMONG KINDERGARTEN PUPILS

By

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A Thesis submitted to the School of Graduate Studies,

Kwame Nkrumah of Science and Technology, Kumasi,

in partial fulfilment of the requirements for the Degree of

Master of Philosophy

(Art Education)

Faculty of Art

College of Art and Built Environment

July, 2015

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i

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

This study was conducted to find out the existing teaching strategies for teaching at the kindergarten, their usage in the classroom as well as their impact on pupils' performance. The study sought to identify instructional materials and activities that teachers of KNUST Nursery School engaged the pupils in when teaching the English alphabet and their related sounds, as well as the challenges associated with them and what teachers do to manage such challenges. The study employed the qualitative research approach to critically study the Curriculum and Handbook for Pre-School Education, both of which guide the teachers in order to find out the existing strategies used in teaching the letters and sounds of the alphabet. Observation, questionnaire and interview were used to identify and study how teachers employ the existing strategies, activities and instructional materials in the classroom and their impact on the pupils' performance in pre-reading and pre-writing. The major findings of the study indicated that the KG 1 and KG2 teachers in the school were not abreast with current strategies because their lessons centred mostly on patterns, joining of patterns and songs were used to teach the letter names and sounds. They employ child centred teaching approaches with play activities in the teaching and learning of the alphabet and sounds. Because some of the pupils had challenges writing the letters accurately, new art based activities were introduced for the teaching and learning of the alphabet and their sounds which made the pupils very active in class and got them fully involved. The activities motivated them to work sometimes without supervision and on the playground. At the end of the study, pupils' showed positive signs of improvement in their reading and writing of the alphabets. To improve the pupils performance, it is recommended that the Kindergarten teachers be trained to use the kinesthetic teaching and learning strategies and related instructional materials to teach their pupils to learn to read and write the letters of the English alphabet and recognise them by their sounds.

TABLE OF CONTENTS

Contents   **Pages**

CHAPTER ONE

CHAPTER THREE

CHAPTER FOUR

CHAPTER FIVE

LIST OF TABLES

KNUST

… … …

LIST OF FIGURES

KNUST

KNUST

CHAPTER ONE

INTRODUCTION

1.1   Overview

This chapter consists of background to the study, statement of the problem, objectives of the study, research questions, delimitation and definition of terms. Other subheadings discussed included importance of the study, abbreviations and organization of the rest of the text.

1.2   Background of the study

Education is generally believed to be a developmental tool that affects every facet of human life. Education may determine a person's socio-economic status and define the level of development of a nation (Ziegler & Goswami, 2005 as cited in Mahon, 2010). The forms of education are formal, informal and non-formal. Formal education starts from the pre-school through to the tertiary level. Kindergarten education is an important aspect of pre-school education. The aim of Kindergarten education is to prepare pupils to fit into the primary educational system at the basic level by means of various teaching and learning strategies (UNESCO, 2006).

Said, Wallhager, Cungua and Ngie (2003), authors of 'Handbook for Preschool Education' state play activities as part of the teaching strategies that are mostly used in teaching and learning processes at the kindergarten. This affects the pupils' entire being as they go through vigorous activities and verbal communication with colleague pupils. Pupils at this level learn effectively by doing. The Report of the 7th Network Conference on 'Early Education for All' (2005) that was held in Zanzibar, Tanzania, indicates that the use of art in activities such as scribbling, drawing, colouring,

painting and clay modelling is a vital tool employed in teaching. Through these creative activities, pupils develop the three main domains of knowledge: the head, hand and heart. The use of kinaesthetic activities in pre-reading and pre-writing activities as an art therapy tool in the development of pupils in the three main domains of education cannot be over-emphasized. This helps in the development of pupils' creative skills, fine motor skills and problem solving skills. This happens when pupils manipulate and control the tools in art - crayons, pencils and brushes.

Reading and writing are additional activities which take their footing from the kindergarten. Ziegler and Goswami (2005) as cited in Mahon (2010) state that reading and writing are vital tools in one's facet of life - business, education, and even the community one finds him or herself. Pupils in the early stages of formal education (kindergarten or pre-school) are engaged in the reading and writing of letters and sounds of the alphabets which forms the basis of reading.

Some pupils may have challenges with the identification, reading and writing of these alphabets and their related sounds. In their handbook on dyslexia, the South Dakota Department of Education (2010) has outlined some of the challenges or difficulties pupils face in the identification, reading and writing of the letters of the alphabets and their related sounds as follows:

1.   Pupils are unable to connect the letter "b" with the "b" sound.

2.   Some pupils also get confused of visually similar letters (b / d / p, w / m, h / n, f / t).

3.   Some pupils also have challenges hearing similar letters (d / t, b / p, f / v). Elliot, Kratochwill, Cook and Travers (2000, p. 173) have explained learning difficulty as ''a term referring to a handicapping condition characterized by a discrepancy

2

between ability and achievement, most commonly manifested in reading, writing, reasoning, and or mathematics''. They further state that learning difficulty or challenge may be as a direct result of a condition or influence. Learning difficulty or challenge may occur alongside other handicapping conditions which include sensory impairment, mental retardation, social and emotional disturbance. It may also be environmental influences which include cultural differences, insufficient and inappropriate instruction as well as psychogenic factors (Hammill, Leigh, MCNutt, & Larsen, 1980, p. 336) as cited in Elliot et al, (2000, p. 173). Different remedies have been used to solve problems in learning. Art therapy is one of such tools used in the remedy of learning difficulties.

The Art Therapy Alliance (2006), an association of art therapists, have explained art therapy as the deliberate use of art-making to address psychological and emotional needs. Art therapy uses art media and the creative process to help in areas such as, but not limited to: fostering self-expression, enhancing coping skills, managing stress, and strengthening a sense of self. Art therapy therefore is a communicative tool and an expressive language that taps into the creativity of a client in a non-threatening environment to address those needs of the client that are not physical. Art forms such as painting, drawing, collage and sculpture play an important role in art therapy to help in verbalizing the thoughts and feelings of individuals.

Art therapy involves art making which aims at healing. It also aims at enhancing the life of any individual who engages in art to address any problem he or she has. This takes the form of nonverbal communication of one's moods and feelings through the use of different art forms (American Art Therapy Association, 1996; VA Palo Alto Health Care System, 2013). It also aims at encouraging one's personal growth; increasing one's self-understanding, and assists in one's emotional damages. This could be used to assist children, adults, families, individual and groups. It helps individuals

3

of all ages create meaning and achieve insight, find relief from overwhelming emotions or trauma, resolve conflicts and problems enrich daily life, and achieve an increased sense of well-being (Malchiodi, 1998; 2010).

Art therapy is sometimes used in schools to support the school in its guidance and counselling sessions. It is also used in schools to serve as a therapeutic dimension and to assist teachers to help pupils with learning challenges in the classroom. This is achieved through creative activities - drawing, painting and other art activities - to enhance the pupils' life skills. Clients of different age groups, economic and social backgrounds depend on a form of art therapy in one way or the other to meet their growing needs. Professionals apart from teachers, like counsellors, physicians and other social workers also employ some form of art therapy in their activities with their clients.

According to Malchiodi (2003), mental images or those drawn on paper, are important in all art therapy practice because through art making clients are invited to reframe how they feel, respond to an event or experience, and work on emotional and behavioural change in the production of an art piece. In contrast to mental images, however, arts making allows an individual to actively try out his or her hands on a desired change through a drawing, colouring, or collage; that is, it involves a real object that can be physically altered.

International Art Therapy Organization and Art Therapy Alliance (2010) has indicated that art therapy gives children, especially those with learning challenges, a way to build their self-esteem and confidence and make them perform better overall academically. Art therapy also gives children a way to express themselves - during art therapy children create or view art as a tool for better handling their feeling through drawing, painting, weaving, modelling with clay, and making of collage works.

4

This study focused on using kinaesthetic activities - collage, weaving, colouring and erasing, sculpture, appliqué among others in the classroom as an art therapy to help pre-school pupils to improve their ability to identify, read and write the English alphabets and also be assisted to associate the various letters with their related sounds. The art therapy tool also helped them to differentiate between sounds as skills for prereading and pre-writing stage.

1.3 Statement of the Problem

According to the Curriculum Research and Development Division (CRDD, 2006) of the Ministry of Education, pupils at the kindergarten level are assumed to be able to read and write simple sentences but that is not exactly the situation in nursery schools. A number of these pupils are either unable to identify, read or write the letters of the English alphabet.

The researcher's preliminary studies as a teacher at the KNUST Basic School revealed that a number of problems affect both pupils and teachers in the teaching and learning process. Some of these problems include: the use of one teaching strategy - the 'Strokes Approach' or 'Pattern' to teach the skill of associating letters and their related sounds as well as the writing of the English alphabets which mostly concentrate on visual learners in the classrooms.

Another problem identified is the large number of pupils in each class and the quantity of Teaching and Learning Materials available for teaching the pupils prereading and pre-writing skills. For example, the Kindergarten (KG) 1 and 2 blocks of the study school had eight classes. Each class had not less than fifty (50) pupils, each of whom had eleven different activity books to work in. Guiding each of these pupils to record

an activity correctly in his or her activity book in a day depletes almost all the energy in the teacher, knowing that the 50 pupils have 10 other workbooks in which they may have to work during the week. This posed a problem for teachers on how to get enough time to manage teaching and learning for such large classes to enable the pupils to perform well. Inadequate instructional materials also posed a problem; as this also forced teachers to device effective ways of using the materials to teach effectively and aid pupils' understanding.

Finally, teachers are assessed based on what their pupils have recorded in their activity books. To avoid being tagged as lazy, the KG teachers focused more on getting the pupils to fill their activity books, bearing in mind the volume of work involved and the time needed to perform this aspect of their work. This made it very difficult for the teachers to regularly assist children with special academic needs.

These identified problems made the researcher decide to introduce an art-based teaching and learning approach into Kindergarten teaching with the aim of helping teachers to solve the problem of pupils' inability to identify, read, write and associate

letters and sounds of the English alphabet. The researcher used the following Teaching / Learning Materials for the art activities designed for the intervention lessons: clay dough, beans, pebbles, sea shells, sand tray, pupils back and index finger, plastic modelled alphabets, music and dance, Styrofoam, fabric, crayons, poster colours, plantain stalk, seeds, biscuits, paper, cut-out sheets, and glue.

Kinesthetic activities that included music and dance were designed using these materials, as a way of teaching lessons to help correct the learning difficulties pupils in Kindergarten 1 and 2 in the study school exhibited.

1.4 Objectives of the study The

researcher intended:

1.   To identify the teaching and learning materials available for teaching pre-reading and pre-writing skills in the KNUST Nursery School.

2.   To describe the teaching strategies KG 1 and KG 2 teachers in KNUST Nursery School employ in the teaching of pre-reading and pre-writing skills and assess how effective these approaches are.

3.   To introduce kinaesthetic activities that can be used as Art therapy tools to improve pupils' performance in pre-reading and pre-writing among Kindergarten pupils.

1.5   Research questions

1.   What are the teaching and learning materials used for teaching pre-reading and pre-writing skills at the KNUST Nursery School?

2.   How do KG 1 and KG 2 teachers use the existing strategies and what difficulties do pupils encounter in pre-reading and pre-writing activities?

3.   How will kinaesthetic approaches improve the teaching and learning of the English alphabet to improve the performance of KG 1 and KG 2 pupils in pre-reading and prewriting? What intervention activities can be adopted to help the pupils resolve their challenges?

1.6.1 Delimitations

The study focused on using art activities as a form of therapy to help KG 1 and KG 2 pupils improve their reading and writing of the English alphabet. The research concentrated on the KG 1 and KG 2 pupils and teachers of KNUST Nursery School in Kumasi, Ashanti Region.

The study centred on school art therapy and used the kinaesthetic approach as art therapy tools in teaching both the letters and sounds of the English alphabet.

1.7 Limitations

The main limitation of the study was the accessibility of the sample population. The teachers had already begun working with the planned academic schedule hence access to the pupils during normal school periods was not possible as the interruption could have interfered with their performance. The teachers and pupils could only be met for the intervention lessons after the close of school. Availability of the pupils was next; since the pupils are very young and their continued stay in school after closing depended on when their parents would come to get them, control over when to stay and when to leave largely depended on the pupils' parents and/or caretakers. In some instances some of the pupils were absent for two or three intervention meetings. This generally affected the flow of the study and the volume of data that could be collected.

1.8   Definitions of Terms

Art: The tangible expression in the form of drawing, collage, colouring and erasing, touching and manipulating activities as tools for developing pre-reading and prewriting skills.

Pupils: Young children between the ages of four and six years who are in school.

Kinaesthetic: A sense of touch. Kinaesthetic activities included pupils touching different instructional materials such as pebbles, broken shells, cut-out papers, seeds, coloured paper and glue them by either arranging or manipulating them to form letters of the English alphabet.

Art Therapy: An established psychological health profession that uses the creative process of art making to improve and enhance the physical, mental and emotional well-being of people of all ages. It involves artistic self-expression.

School Art Therapy: The use of art activities to correct learning challenges of pupils in the classroom and in school situation to support the school in its guidance and counselling sessions

1.9   Abbreviations

CRDD: Curriculum Research and Development Division

GES- Ghana Education Service

IRA- International Reading Association

KNUST- Kwame Nkrumah University of Science and Technology
NAEYC-The National Association for the Education of Young Children

SPSS: Statistical Package for Social Scientists

UNESCO- United Nations Educational, Scientific and Cultural Organization

1.10 Importance of the study

The findings from the study will provide administrators and management of KNUST Basic Schools and other basic schools with insight into the challenges that kindergarten pupils face with the reading and writing of the English alphabet and how the kinesthetic approach can be adopted to effectively help them.

This study can be used as a reference for other researchers who wish to conduct research on subjects related teaching and learning in early childhood schools. Findings from the study could serve as a platform for further research as it can guide and also enhance the work of other researchers.

Recommendations of the study will complement the efforts of curriculum developers, policy makers and governments to address the challenges kindergarten teachers and their pupils face and provide appropriate curriculum materials for resolving problems associated with the reading and writing of the English alphabet. The recommendations will provide a road map for the correct use of kinesthetic activities as art therapy to address the current difficulties in teaching and learning at the kindergarten to enhance pupils' academic performance.

1.10.1 Arrangement of the rest of text

Review of literature is discussed in Chapter Two. Chapter Three focuses on the methodology used for collecting data to answer the research questions. The findings of the study are presented and discussed in Chapter Four. Conclusion and recommendations drawn from the findings of the study are presented as Chapter Five.

CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURE

2.1 Overview

This chapter reviews the available literature related to Kindergarten Education, policies that back kindergarten education and challenges that institutional authorities face when running pre-schools. It also reviews literature on the classroom environment, teaching strategies that are relevant to the teaching and learning of kinesthetic activities, the developmental stages of pupils and the activities that they could perform in relation to art. Literature on Art and Art Therapy as a teaching strategy and its impact on teaching and learning were also reviewed.

2.2 The concept of Kindergarten Education

Kindergarten education or Early Childhood Education offers education to children between the ages of three and five or seven years prior to the commencement of compulsory education at primary school (Wikipedia, 2014). To Education International (2010), Kindergarten education is a branch of the educational system where young children below eight years are introduced to pre-school activities before receiving the compulsory basic education. This is also known as infant or child care programme, pre-school or Early Childhood Education (ECE). Generally, the objective of kindergarten education is to prepare young children for formal education (UNESCO, 2006).

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. 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 (Yorke, 2012).

2.3   Classification of Kindergarten Education

Pre-school education refers to the early childhood education. In Ghana it is labelled as follows: Crèche; for children between the ages zero and two years,; Day Care; for children aged between two and three years,; Nursery; for children between the ages of three and four years; and Kindergarten; for children between the ages of four and five years (Education Reforms, 2007). Other frequently used terms for early childhood education include pre-school, early years, kindergarten, playgroup, nursery, pre-grade one, preparatory year, 'zero year' (UNESCO, 2007).

2.4   Objectives of Kindergarten Education

The objective of preschool education is to pre-dispose children between the ages of three and four years to conditions of formal education. The learning activities are normally half-day and half-week, but with increasing numbers of parents becoming active in the job market,; teachers now work for long hours and sometimes work for a full day (Magnuson, Meyers, Ruhun & Waldfogel, 2004). The child's maturation and age serve as an important yardstick for classifying the various levels of early childhood education.

Research has shown that the early years of children, that is between age one and six, are crucial for their physical, psychological (cognitive, psychosocial and personality

building) development. According to the Anamua-Mensah-report on Educational Reforms (2007), the objectives of kindergarten education should be able to:

a. Predispose children to conditions of formal schooling in order to accelerate the learning process during formal education.

b. Nurture children in safe and caring environment with appropriate infrastructure, which will allow them to become healthy, alert, secure and able to learn.

c. Strengthen primary education through the provision of quality pre-school education;

d. Introduce children to basic hygiene and sanitation for healthy living;

e. Provide opportunities for the overall personal development of children through individual play and group activities;

f. Minimise gender barriers which seem to affect girls even before they enter primary school and

g. Inculcate in children the desire for learning.

2.5   Kindergarten Policies and Intervention

The benefits of developing the child at the early stages of the child's life can be realised in the child's social, physical, psychological and intellectual upbringing when the child receives the necessary nutrition, information and exposure to the right academic conditions.

In a report compiled by the United Nations Educational, Scientific and Cultural Organization (UNESCO) International Bureau of Education (2006), before 2002, preschool education was not part of the formal school system in Ghana; it was introduced as a result of recommendations made by the President's Committee on Review of Education Reforms (2002). The report provided that Early Childhood Education should be included in the formal education system. The Government of Ghana, in its White Paper Report on Education Reform Review (2006), among other recommendations, indicated that by the close of the year 2010, the Government should enhance the quality of pre-school education and improve the developmental readiness for learning of children from the ages of 4 - 5 years. This is clearly captured in article 38(1) of the 1992 Constitution of Ghana under the Direct Principles of State Policy. The article provides as follows: "The State shall provide educational facilities at all levels…" This provides a justification for early childhood education as part of the formal and basic education system in Ghana.

Currently, the Department of Social Welfare provides policy guidelines and direction for pre-school education in Ghana. However, Woodhead (2007) opines that the early years are determinative and impact on the child's growth and advancement. He also emphasizes that it is the earliest and most impacting subjects that direct early childhood policy. Similarly, governments all over the world appreciate the significant contributions preschool development makes in bridging the poverty gap. However, there is a whole gamut of services (Magnuson et al, 2004) that give a head start to the child's academic pursuit. According to Magnuson et al (2004), the United States Government in 1965 commenced a programme dubbed "Head Start Programme" targeted at children of low income background and children with developmental challenges. In Africa, the World Education Forum in its Dakar Framework for Action

(2000) put pre-school education high on its agenda and implored governments to increase access to early childhood education in favour of the poor.

2.6   Kindergarten Curriculum

In formal education, curriculum is a planned interaction of pupils with instructional content, materials, resources and processes for evaluating the attaining of educational objectives (Wikipedia 2013). Curriculum is everything learners need in school. The Commonwealth of Learning (2000) defines curriculum as a fusion of learner, teaching and learning strategies foreseen or unforeseen experiences, output and outcomes possible within an educational institution. Marsh (2009) states that curriculum is the whole of learning skills given to learners to accomplish general skills and knowledge at various institutions.

According to the Curriculum for Kindergarten (2006) developed by the Curriculum Research and Development Division (CRDD) of the Ghana Education Service (GES), the kindergarten curriculum recognises the principle that children learn by "doing". The curriculum thus provides children with expressive activities that demand their participation in all learning. This lays the foundation for later formal experiences in learning. The kindergarten curriculum is designed to help children to:

a. develop communication skills that enable them to express their emotions, thoughts and actions in various ways such as listening, speaking, reading and writing.

b. familiarise themselves with the environment and its living and non-living components.

c. learn to live a healthy life.

d. develop their psychosocial competences such as assertiveness, selfconfidence and relate positively with others.

e. awaken and develop their potential creative abilities.

f. respond emotionally and intellectually to the world around them, through music and dance; and

g. appreciate and find pleasure in their own creation and those of others.

The CRDD (2006) has identified seven areas of learning experiences to be observed in kindergarten education. These are:

a. Language and literacy

b. Environmental studies

c. Mathematical/Science and Technology

d. Creative Activities (Art, Music and Dance)

e. Music Dance and Drama

f. Physical Development

g. Psychosocial skills.

2.7 Teaching Strategies in Kindergarten Education

According to Orlich, Hardy and Callahan (2009), teaching strategies are the comprehensive scheme employed through various activities considering the edifice, instructional purposes and an outline of planned procedures necessary to implement the strategy. Teaching strategies play a key role in the teaching and learning process. With an effective teaching strategy to be applied in the classroom, there is the need to consider the background as well as the type of learner one is dealing with. The right strategy to employ requires an enhancing classroom and classroom environment. According to Elliot, Kratochwill, Cook and Travers (2000), the classroom is a place where cultures unite. Thus, Sue and Sue (1990) recognise that children with diverse backgrounds come under one roof to ensure that teaching and learning take place.

Willingham (2010) has outlined the three main types of learners as Visual learners, auditory learners, and tactile learners. Willingham (2010) explains that visual learners learn through observation; auditory learners learn by listening to what is being taught, while the tactile learners specifically learn through the sense of touch or feeling with the body. However, Gardner's (1993, 1999) Theory of Multiple Intelligences outlines eight kinds of intelligences that learners exhibit and also explains the different levels of intelligence that learners exhibit and what teachers should consider when planning lessons to be delivered in the classroom. These kinds of intelligence, according to Gardner (1993, 1999), are:

(a)   Logical-Mathematical Intelligence - the ability to detect patterns, reason deductively and think logically. Most often associated with scientific and mathematical thinking.

18

(b)   Linguistic Intelligence - the ability to use language masterfully to express oneself rhetorically or poetically. Also allows one to use language as a means to remember information.

(c)   Spatial Intelligence - the ability to manipulate and create mental images in order to solve problems. Not limited to visual sight, Gardner noted that blind children can possess spatial intelligence.

(d)   Musical Intelligence - the ability to read, understand, and compose musical pitches, tones, and rhythms. (Auditory functions are required for a person to develop this intelligence in relation to pitch and tone, but it is not needed for the knowledge of rhythm.)

(e)   Bodily-Kinesthetic Intelligence - the ability to use one's mind to control one's bodily movements. This challenges the popular belief that mental and physical activities are unrelated.

(f)   Interpersonal Intelligence - the ability to apprehend the feelings and intentions of others.

(g)   Intrapersonal Intelligence - the ability to understand one's own feelings and motivations.

The teaching strategies or methods used in implementing the curriculum are the arranged interactions of people and materials planned and used by teachers. They include the teacher role, teaching styles, and instructional techniques (Siraj Blatchford, 1998 as cited in Bowman & Donovan, 2000).

Said, Wallhager, Cungua & Ngie (2003) in their 'Handbook for Pre-school

Education' have outlined some strategies used in the teaching and learning process at the Kindergarten level to be somehow a fusion of Gardner's multiple intelligences theory and identification of learning styles but this is not stated. These strategies include child-centred strategy, teacher-centred strategy, play strategy, dialogue, and drama. The curriculum further states listening, speaking, reading and writing as the four main skills that kindergarten children need to acquire for effective communication in early childhood expression of thought, emotions and actions through manipulation of materials and suitable tools to create awareness of his/her environment.

2.8   Challenges in Kindergarten Education

The funding, staffing, organization and delivery of early childhood education differs from place to place (Lambert et al., 1992; Woodill, Bernhard & Prochner, 1992; Cochran, 1993; EC Childcare Network, 1996 as cited in Yorke, 2012). In other jurisdictions, desire for non-parental care, young children's education, communal intervention and local infrastructure has produced a similar response of putting pressure on existing infrastructure and other facilities (Benhabib, 1992 as cited in Yorke, 2012).

Globally, early childhood education has had interest groups monitoring and providing supervisory direction to preschool institutions (public and private). These interest groups range from governmental agencies to 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 that are into the supervision and monitoring of several aspects on preschool education.

Although there is worldwide increase in pre-school education, access and quality in developing countries cannot be equalled to the developed nations. This is evident from the statistics of the Global Partnership for Education (GPE) which shows that Sub-Saharan Africa showed the lowest gross enrolment 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 early childhood education and care (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 bedevilling pre-school education in Sub-Saharan Africa.

2.9   Classroom Environment in Kindergarten Education

The classroom provides the appropriate setting and environment for both teaching and learning. It comprises the classroom's physical environment, the social system, the atmosphere, and norms and values (Creemers & Rezigt, 1996). Research from different parts of the world has shown that the classroom provides an environment that is significant to student achievement (Wang, Haertel & Walberg, 1997; Muijs & Reynolds, 1999). The classroom environment refers to the organization and use of

space, the daily schedules and routines, the social and emotional atmosphere that must meet children's developmental needs (Yorke, 2012). This will improve the learning and prevent problem behaviours before they occur.

Studies have shown that the areas to be considered in creating classroom environment for children are: the setting and maintenance of the classroom; establishing a structure for each day; and creating a classroom community (Yorke, 2012). The Mississippi Baptist Convention Board (undated) designed a pre-school model classroom for kindergarten which had eleven (11) areas or learning centres consisting of the following: blocks or construction (open shelve); group time area; dramatic play centre; sink; stove (cooking); doll bed (toys and games); art centre; nature; manipulative/puzzles (discovery); group time area, and art shelf. Figure 2.1 shows the organization of this kindergarten model classroom.
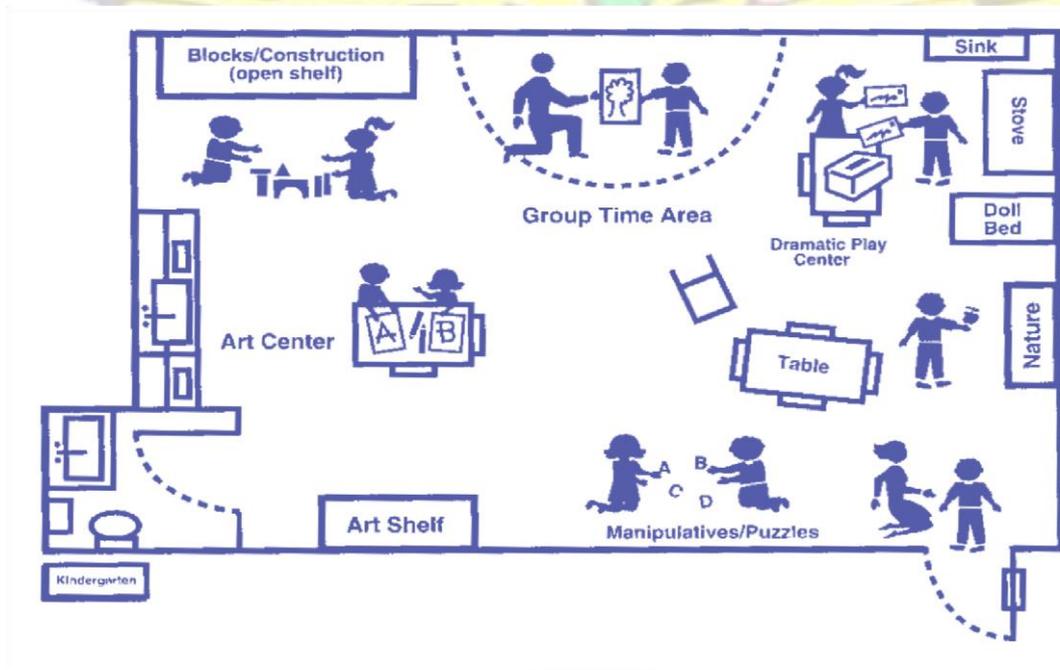
Figure 2.1: Kindergarten Model Classroom

The classroom (physical) environment in Fig. 2.1 creates an opportunity for children to choose and interact with materials through creative activities in a centre/area over a period of time as well as taking care of learning materials.

2.10   Developmental Stages of Children in Kindergarten

Child development mostly refers to a total advance to policies and programmes for children from birth to about eight years. This is also the key to a full and productive life for a child and the progress of a nation (UNICEF, undated). 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 of early childhood education. This has helped to develop the holistic or whole child approach of ECCE that 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) has outlined five periods in a child's development. They are the prenatal period (from conception to birth);, infancy (from birth to about three years who rely solely on adults to meet their basic needs;, early childhood (about the ages of four to six years), adolescence; (from about the age of ten to twelve);,endings at between eighteen and twenty-two years of age.

Papalia, Olds and Feldman (2004) and Santrock (2005) as cited in Enti (2008) agree on humans going through three main developmental processes: biological processes or physical development (changes in the body), cognitive processes (which include change and stability in mental abilities such as thought, language, memory, intelligence and

23

creativity) and socio-emotional processes or psychosocial development (which include change and stability in one's personality, emotional life and social relationships).

Although Sharam, Cross and Vennis, (2004), Papalia et al (2004) and Santrock (2005) as cited in Enti (2008) share similar ideas, it is clear that humans go through five developmental processes which have related activities that children from the ages of four and five, where kindergarten pupils find themselves, exhibit.

These include physical (changes in children's large and small muscles), motor (changes in movement of children's muscles), cognitive (how children think, see their world and use what they have), language (understanding and communication through words, spoken or written), and social (children learning the values and accepted behaviours of society) developmental processes. These developmental processes are interconnected and help differentiate the phases in a child's life; each process affects the other as a child develops. Studies have shown that these developmental processes could achieve better results through the use of the arts.

The use of the arts in early childhood education (kindergarten) is generally known to have a great impact on the cognitive, physical, emotional and social development of children (Loop, undated). This is because a child interacts with art tools and materials to create art without considering its beauty. In support of a child, the creation of art is an activity that brings to form, the thinking, feeling and perception. Thus, art creation to the child is mostly seen as a way of expressing himself and the things he values (Lowenfeld and Brittain, 1970 as cited in Enti, 2008) through drawing and painting activities. The National Art Education Association has stated that art helps children to build critical thinking skills, dexterity and imagination abilities which translate into real-world skills such as problem solving and strategic planning. Teaching and learning of the arts in kindergarten will one way or the other promote positive emotional

development by encouraging children to discover and examine their feelings so as to widen a deeper understanding of themselves (Loop, undated).

Roland (2006) has named four stages of children's artistic development as scribbling, pre-symbolism, symbolism, and realism. On the other hand, Lowenfeld and Brittain (1970) have outlined five children artistic development, namely; scribbling, preschematic, schematic, gang age, pseudo-naturalistic stages and the period of decision.

Lowemfeld and Britain consider a child's environment as a factor which may cause changes in his or her emotional connections to people as well as his or her movement from one stage to the other in line with his or her artistic development (Lowenfeld & Brittain, 1970 as cited in Enti (2008). This is because art expression containse some sort of evidence of the emotional and mental health of the individual (Alter-Muri, 2002; Michael, 1986). Roland conceptualized that to represent human figure, pupils aged(three to four years), use circles and lines while pupils who are between (five and six years), draw the human figure with different heads, with the trunk, arms and legs positioned in the right locations.

2.11   Overview of Art and Art Therapy

The term 'art' has been defined variously by different authors. Malchiodi (2010) explains art as the expression of oneself through the use of art resources of different kinds and qualities, texture, pattern and colour through various activities like drawing, painting and sculpture. CRDD (2006) and Malchiodi (2010) explained that tools and materials used at the Kindergarten include: natural materials such as clay, leaves and sand; waste materials which include empty rubber, steel or plastic containers and bought

materials from shops which include paper, crayons, brushes and paint. Art forms such as sculpture and activities like painting are important aspects that form part of one's life hence the need to be included in the curriculum for formal education.

Moreso, Goldberg (1997) as cited in Arhin (2012) outlined seven reasons for promoting art education as:
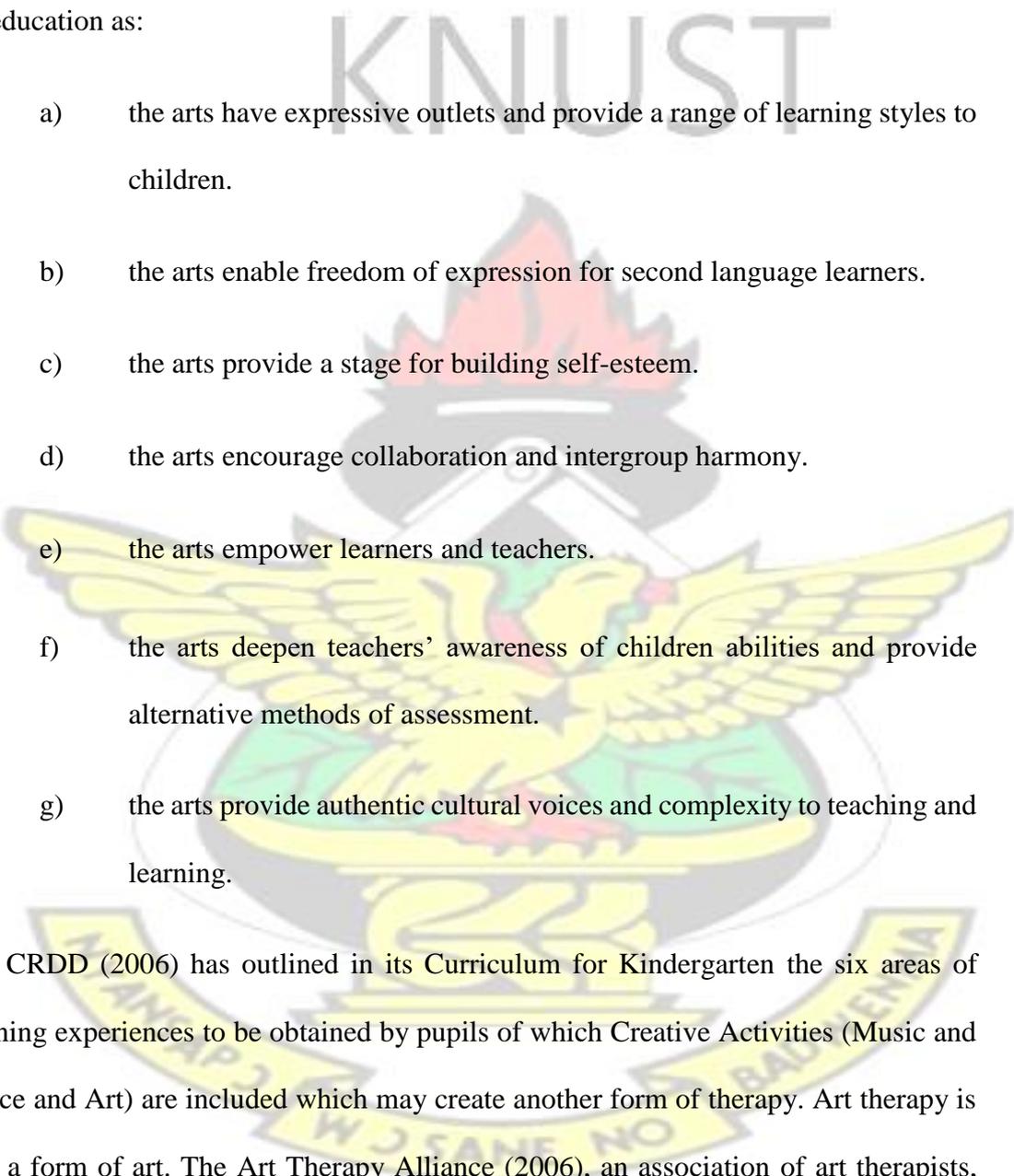
a)   the arts have expressive outlets and provide a range of learning styles to children.

b)   the arts enable freedom of expression for second language learners.

c)   the arts provide a stage for building self-esteem.

d)   the arts encourage collaboration and intergroup harmony.

e)   the arts empower learners and teachers.

f)   the arts deepen teachers' awareness of children abilities and provide alternative methods of assessment.

g)   the arts provide authentic cultural voices and complexity to teaching and learning.

The CRDD (2006) has outlined in its Curriculum for Kindergarten the six areas of learning experiences to be obtained by pupils of which Creative Activities (Music and Dance and Art) are included which may create another form of therapy. Art therapy is also a form of art. The Art Therapy Alliance (2006), an association of art therapists, explains art therapy as the purposeful use of art-making to deal with psychological and emotional needs. Art therapy also involves the making of art which aims at healing and enhancing the life of a person through nonverbal communication of one's moods and

feelings (American Art Therapy Association, 1996;, VA Palo Alto Health Care System, 2013). However, Malchiodi (1998) provides that Art therapy is used in schools to support the school in its guidance and counselling sessions. It has therapeutic dimensions and addresses the need of pupils with learning challenges in the classroom through teachers' support through creative and life enhancing skills.

Malchiodi further explains that clients of different age groups, economic and social backgrounds depend on one form of art therapy or another to meet their growing needs. Professionals apart from teachers, like counsellors, physicians and other social workers also employ some form of art therapy in their activities with their clients and in the field of their work.

2.11.1 The Therapeutic aspect of Art

Govrin (2013), in the S'clairer Newsletter states that 'Art therapy is an effective treatment of for people experiencing developmental, medicinal, educational, and social impairment'. Art therapy, according to Malchiodi (1998), uses art media and the creative process to help in areas such as, but not limited to: fostering selfexpression, enhancing coping skills, managing stress, and strengthening a sense of self as well as managing children with learning difficulties or challenges. In verbalizing the thoughts and feelings of individuals, art forms which include painting, drawing, collage and sculpture play a key role in art therapy (Malchiodi, 2010).

Art therapy is also aimed at encouraging one's personal growth;, increasing one's self-understanding, and assisting in correcting one's emotional damages. The

therapeutic aspect of art could be used to assist children, adults, families, and groups of people who find themselves in trauma, conflicts, learning challenges, and everyday life challenges to achieve an increased sense of well-being (Malchiodi, 1998; 2001;

2010).

2.11.2   Art Therapy as teaching and learning tool for children with learning challenges

Malchiodi (2010) explains that Art is a natural form of communication for children. This is because learning is effective when children express themselves through visual activities though verbal means may be used. Art making has also been shown to enhance cognitive abilities, improve social skills, and encourage self-esteem in school-age children. Adu-Agyem, Enti and Peliga (2009) submitted that the arts offer essential opportunities for creative expression, problem solving and social development. Malchiodi (2010) further explains that diverse art-based techniques (approaches or strategies) such as-painting/colouring, drawing, sculpture, and modelling are used in schools to assess students' cognitive development;, emotional development;, academic strengths and problems;, sensory- motor;, social or interpersonal and behavioural skills. The art therapist uses drawing as an assessment tool in understanding the challenges faced by children such as emotional adjustment. Again, these drawings help the child to reveal for example, his or her fears for an assessment to be carried out and for the appropriate interventions to be put in place to assist the troubled child (Brinkman, 2004; Faller, 1988; Malchiodi, 2001; McDonald, 2002 as cited in Enti (2009).

Malchiodi (2010) further explains that art therapy serves as an important tool in schools where it is used in addressing a variety of learning needs of pupils. These needs include learning disabilities, attention deficit disorder (ADD), attention deficit hyperactivity disorder (ADHD), autism, mental retardation, physical disabilities, behavioural disorders, and emotional disorders. That art therapy may be used to develop activities to among other things improve study skills and classroom performance.

2.12   Kinesthetic Activities for Pupils in Kindergarten

According to Aamir Khan (2007), the director and producer of the movie 'Like Stars on Earth', kinaesthetic learners are those generally considered to be hyperactive, troublesome and difficult. Hutton (2013) further explained that when kinaesthetic learners move around and engage their muscles in learning then it means learning is at its peak. Hutton outlines seventeen (17) signs portrayed by kinaesthetic learners as:
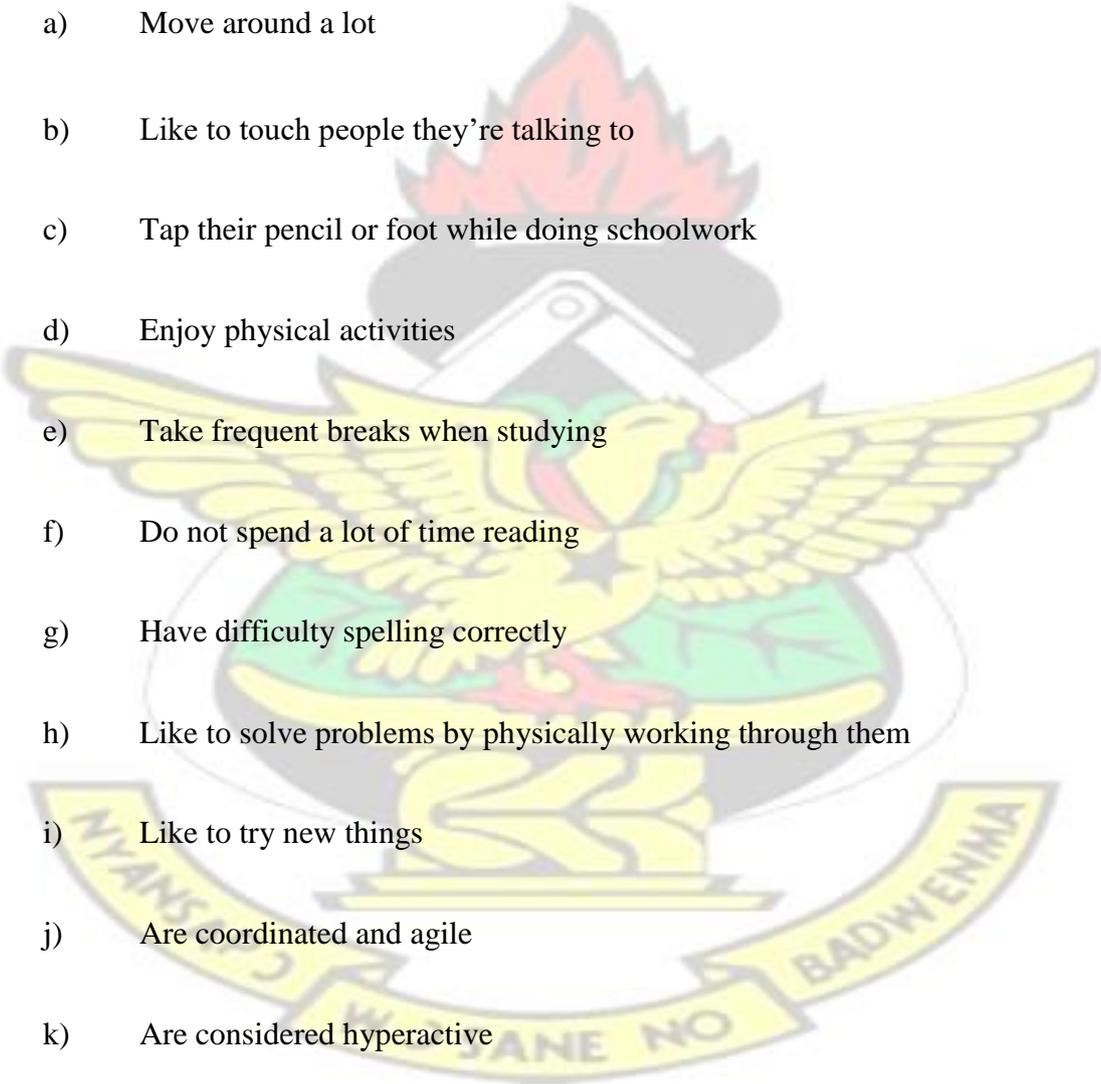
a)   Move around a lot

b)   Like to touch people they're talking to

c)   Tap their pencil or foot while doing schoolwork

d)   Enjoy physical activities

e)   Take frequent breaks when studying

f)   Do not spend a lot of time reading

g)   Have difficulty spelling correctly

h)   Like to solve problems by physically working through them

i)   Like to try new things

j)   Are coordinated and agile

k)   Are considered hyperactive

l)   Express their feelings physically, such as hugging and hitting

m)   Move their hands when they talk

n)   Dress for comfort, instead of style

29

o)   Lie on the floor or bed when studying

p)   Enjoy touching things

q)   Have difficulty sitting still for extended periods of time

r)   Excel in athletics and the performing arts

However, Hutton (2013) has explained that because kinaesthetic learners cannot sit and do the work, they look down on themselves. Their learning styles can be maximized in a number of ways.

The CRDD (2006) also mentions a number of approaches which a teacher with kinaesthetic learners can adopt. This includes the provision of tactile or concrete learning materials for the pupils to manipulate. Such tactile materials include abacus, modelling clay, models, sandpaper or carpet, drawing materials, puzzles, wooden numbers and letters, papers, blocks and cubes, felt boards, photographs, geo-board with rubber bands, as well as dialogue, drama, games, teacher and child-centred activities.

Some kinaesthetic activities in relation to the letters of the alphabet by people include:

a)   Imaginative Tree (2014) created letter 'C' impressions in clay dough with wooden letters and decorated them with colourful beads.

b)   Gorman (2012) used a sand tray in teaching and learning of both numerals and alphabet.

c)   The Imaginative Tree (2014) designed a matching alphabet game using beans.

d)   Hampton (2014) used fabric scraps to decoupage cardboard alphabets of the letters Y, O, U, C, A, N.

c)   Arhin (2012) used drawing activities to improve the mathematical abilities of primary school children. Enti (2008) also used drawing to explore the influence of temperament on the art of some selected children in the primary school.

d)   Warren (2012) outlined various collage activities for pre-school which included paint collage, colour collages, glue collage, water mosaic collage, waxed paper collage and self-stick paper collage based on the themes- nature collage, beach collage, shape collage, texture collage, yarn collage, shiny collage and multi-media collage.

Understanding the characteristics of children is very important in having an insight into their thoughts and actions in order to deal with them. Children of pre-school age have different characteristics which are relative to the factors that occur within their cultural and immediate environments. This means that though there may be notable universal characteristics, there are peculiar ones that are also unique to an individual child or group of children with the same background. It is worthy therefore to study the characteristics of pre-school children in Ghana in order to know how those who have difficulty learning the skills they require for formal education and the instructional strategies that their teachers could adopt to help them overcome any learning difficulties they encounter.

CHAPTER THREE

METHODOLOGY

3.1   Overview

This chapter discusses the approaches used by the researcher to achieve the objectives for this study. This contains the research design, sampling techniques, instruments adopted and used for gathering data for the study as well as the analysis plan.

3.2   Research Design

The study adopted the qualitative action research approach to identify and examine the existing teaching strategies teachers use in teaching the letters and sounds of the English alphabets, how they use these strategies in the classroom and their impact on pupils' performance with the available teaching and learning materials.

Denzin and Lincoln (2003) as cited in Ospina (2013) have explained qualitative research as an interpretive and naturalistic approach to studying natural situations. Also, Leedy and Ormrod (2005) have declared that qualitative research uses in addition to questionnaire, instruments like participant observations, interviews and meta-analysis or critical review of documented resources in collecting information. According to According to Given (2008), qualitative methods are best used for addressing many of the why questions that researchers have in mind when they develop their projects. Whereas quantitative approaches are appropriate for examining who has engaged in behaviour or what has happened, and while experiments can test particular interventions, these techniques are not designed to explain why certain behaviours occur. Qualitative research gives the researcher the chance to observe, interview,

acquire data through questionnaire, evaluate and sometimes critically study written documents of situations of a particular setting in a period of time. Because this study sought to collect information and use the information gathered to identify the existing strategies and available materials used in the teaching and learning of the letters and sounds of the English alphabet, the researcher adopted the qualitative research design to enable a thorough study of the situation in the selected school. The essential decision was to assess the effectiveness of the existing strategies on pupils' performance with respect to the English alphabet in the KNUST Nursery School.

3.3   Action Research

Action research is a natural part of teaching (Miller, 2007). Action research, according to Parsons and Brown (2002), is a process where a teacher or groups of teachers investigate and analyse challenges pupils face in their learning process through regular observations and data collection. The teacher or these groups of teachers then design and implement more appropriate and effective strategies to improve their pupils' learning process. Action research is a research approach that gives insight to teachers to understand why, when and how pupils' learn (Miller, 2007). It also deals with their own problems, provides better opportunities to understand and improve the educational practices; build stronger relationship among staff, and provide alternative ways of viewing and approaching educational questions

(Mertler & Charles, 2008).

To enable the researcher understand how the teaching and learning of the English alphabet and their related sounds are done at the kindergarten, the action research method was adopted to study classroom activities that both pupils and teachers engage

in. The adoption and use of action research method of qualitative research for the study enabled the identification of the existing approaches or strategies used for teaching the letters and sounds of the English alphabet, its usage in the classroom and how the strategies impact on pupils' performance at the KNUST Nursery School. Based on gaps identified in the teaching-learning processes, the researcher designed a new strategy to engage 50 Kindergarten (KG) 1 and 70 KG 2 pupils in practical exercises that were also assessed to measure their outcomes.

3.4   Population for the Study

A population is the complete set of cases or group members from which the researcher is interested to seek information. Population, according to Black (1999), is the larger group from which a portion is chosen for a research. The population used for this study was made up of all kindergarten pupils and teachers who teach at the kindergarten and other departments which deal with children of the same age as kindergarten pupils.

3.4.1 Target Population

The target population for this study was limited to pupils of KNUST Nursery School and teachers who are involved in teaching kindergarten pupils and some other agencies involved in kindergarten education and activities. The reason was that the researcher is currently teaching at the KNUST Nursery School which provided easy accessibility to both the pupils and teachers. Another important reason behind the choice of school was the fact that the school has been in existence for more than fifty

(50) years now and is a model early childhood education centre in Kumasi, Ghana.

3.4.2   Accessible Population

Accessible population was obtained by selecting a portion of the target population of teachers and pupils of the KNUST Nursery School for interaction to enable the collection of data for the study. The accessible population for this study was made up of 200 pupils who were observed in four classes from Kindergarten One (KG1). Later, 50 pupils in Kindergarten One and 70 pupils in KG2 were selected for the intervention activity. The researcher also contacted 20 KG teachers for further study.

Tables 3.1 and 3.2 explain the accessible population selected for the study.

INSTITUTION	NUMBER OF TEACHERS	NUMBER OF KG 1 PUPILS	NUMBER OF KG 2 PUPILS	TOTAL
KNUST Nursery School	20	200	70	290

Table 3.1: Accessible population for observation
Source: Fieldwork, 2014

INSTITUTION	TEACHERS OBSERVED	KG1 & KG2 PUPILS	TOTAL
KNUST Nursery School	20	120	140

Table 3.2: Accessible population for the intervention activity Source: Fieldwork, 2014

3.5   Sample and Sampling Techniques

A sample is a sub-group or part of a larger population who are engaged a research study. Tryfos (1996) as cited in Saunders, Lewis and Thornhill (2007) has explained sample as a portion narrowed from a larger body. The author explains further that a sample is

mostly used because it is impractical, inconvenient, time and probably money to study the larger population. The researcher adopted a sample from the accessible population.

The researcher used both random and purposive sampling approaches to select the sample for the study, which included teachers, KG 1 and KG 2 pupils of KNUST Nursery School for the study. The purposive sampling technique was used to select KG1 pupils because they were the ones who were learning the reading and writing of the letters and sounds of the English alphabet. Kindergarten Two pupils were randomly selected because they had learnt the letters and sounds at Kindergarten One and were expected to be able to identify, read, and write the letters and sounds of the alphabet correctly yet a huge number of these pupils (about 70 percent) are known to be unable to satisfy these demands.

The teachers were purposively selected because they were the immediate people who were handling the pupils at both KG 1 and KG 2 and were helping them to grasp the names, shapes and sounds of the English alphabet. The sample of 120 pupils and 20 teachers who formed the accessible population, were open and willing to be observed, assessed, interviewed and answer the questionnaire used for the study.

3.6   Research Instruments

For purposes of triangulation and validation of data required to answer the research questions guiding the study of the strategies and the approaches used in teaching the letters and sounds of the English alphabet at the kindergarten, data were collected via meta-analysis or critical review, observation, quasi-experiment, questionnaire and interview. Triangulation, which involves the use of more than one instrument in data

collection, was to ensure the research obtains a total picture of the teaching and learning situation of the English alphabet in the KNUST Nursery School.

Triangulation is an essential tool in ascertaining the authenticity of a research (Gay, 1992). The five instruments used for data collection are described as follows.

3.6.1 Meta-Analysis or Critical Review

According to Wallace and Wray (2006), critical review is an academic appraisal of an article which offers both summary and critical comment on the content. The type of critical review includes but is not limited to evaluations of the merit of an academic article or body of literature to the development of research and understanding of knowledge within a specific discipline (Northey, 2005). Meta-analysis or critical review was used to critically study both the Curriculum and Handbook and find out the strategies or the approaches used in teaching the letters and sounds of the English alphabet. Instructional materials and activities applied in teaching the letters and sounds were not left out. The purpose of this instrument was to find out the existing strategies, instructional materials and activities used for the teaching and learning the

English alphabet and their related sounds at the kindergarten.

3.6.2 Questionnaire

Taylor-Powell (1998) is of the view that a questionnaire is an instrument used to gather data which can be tabulated and discussed. A questionnaire can be used to solicit for evidence about what people do, what they have, what they think, know, feel, or want. The two main types are Open-ended questionnaire which gives respondents the opportunity to provide their own answers, and Close-ended questionnaire in which responses are provided for the respondents to select either one or multiple answers.

A 26- item questionnaire consisting of open ended questions was designed and distributed personally to the sampled Kindergarten/Nursery teachers to solicit information on the application of the existing teaching and learning strategies in the classroom. The questionnaire (see Appendix B) was purposely designed to gather personal data and general information about the sampled teachers, their awareness and use of the existing strategies, instructional materials and the various activities that pupils engage in the learning of the English alphabet and their related sounds at the respective class levels. Information on the challenges that teachers and pupils face with the use of available strategies and their management was also sought. Availability of instructional materials and their usage in relation to the teaching and learning of the English alphabet and their sounds were also sought.

The questionnaire was designed to give the researcher insight into what pertains at the KNUST Nursery School in relation to the teaching and learning of the letters and sounds of the English alphabet and what to look out for during observation of teaching and learning activities in the KG classrooms.

3.6.3 Observation

Taylor-Powell, Ellen and Steele (1996) assert that observation is an instrument used by the researcher to collect information through viewing events, behaviours, or noticing physical appearance in their natural settings. This can be where one observes interactions, procedures or behaviours as they occur or observes result of interactions, procedures or behaviours.

For this study, the researcher directly observed 20 teachers of four classes of Kindergarten One which has 200 pupils. At separate times, the researcher used a

38

designed observation guide (appendix C) to observe both teachers and pupils in relation to the teaching and learning of the English alphabet and sounds. The guide considered:

1. the application of the existing teaching strategies

2. instructional materials

3. activities used in the classroom, and

4. pupils' performance in relation to the strategies used.

3.6.4 Interview

According to Lisa (2008), interview is an interaction between two or more persons with a specific purpose or motive. Interviews are mainly conducted to seek for data which cannot be openly observed (Fraenkel & Wallen, 1996). Interview can be grouped into three main types, namely, structured interview, semi-structured interview and unstructured interview as cited by Saunders, Lewis and Thornhill (2007). Structured interview is used to collect quantifiable data where the researcher designs an interviewer-administered questionnaire that is used to conduct interviews. By this the researcher follows and asks a set of questions based on the intervieweradministered questionnaire using the same words.

Semi-structured interview is used to gather data where the researcher may not strictly follow the interview-administered questionnaire but rather omits or adds to the questions in a particular interview depending on the flow of conversation. Semistructured interview is an informal interview which the researcher uses to explore indepth, a general issue of interest. This may not follow any predetermined list of questions of any form or any sequence of questioning. The interviewee in this case is

given the chance to talk freely to bring out issues or ideas on events, behaviour and beliefs.

With the aid of a designed interview guide (see Appendix A), semi-structured interviews were held with 20 sampled teachers of the KNUST Nursery School to gather the necessary data for this study. The researcher had a one-on-one conversation with 10 pupils after the intervention activities regarding learning challenges that some pupils have, including the turning of alphabets by such KG pupils.

3.6.5 Quasi-experiment or Achievement Test

Quasi-experiment is a practical study used to evaluate the effect of an intervention on its target population. Gribbons, Barry and Hermann (1997) have stated that quasiexperimental designs are used to assess educational programmes when random task is not possible. This is effective and mostly used by researchers for pre-testing and posttesting. In this study, quasi-experiment was used to assess pupils before, during and after the researcher's intervention activity using achievement test in action research.

Fraenkel and Wallen (2009) indicate that achievement tests can be used as a means to measure an individual's knowledge in a given area or subject as well as learning or effectiveness of instruction. Achievement test was used as a source of instrument to measure the performance of sampled KG pupils in the writing, reading and identification of the sounds of the English alphabet before, during and after the intervention. The result from these test were analysed to measure the effectiveness of the interventional instruction administered to pupils.

3.7　Primary and Secondary Sources of Data

Primary data were obtained through the questionnaire, observation, interviews and quasi-experiment/achievement test on the teaching and learning of the letters and sounds of the alphabet. The objectives and the research questions were considered in retrieving information using the above instruments. Field notes and pictures taken were forms of primary data collected from KNUST Nursery School. These aided the researcher to analyse and conclude from the research findings to mirror the state of the usage of the existing strategies, instructional materials and activities in the teaching and learning of the letters and sounds of the English alphabet as well as their impact of pupils' performance at the school.

Secondary data were information retrieved from journals, books, brochures, as well as the internet. These were made up of both empirical and theoretical studies from a number of researchers and authors in education in general, kindergarten education and art therapy as presented earlier in Chapter 2.

3.7.1 Administration of Research Instruments

The researcher, who is now a teaching staff at the KNUST Nursery School had a preliminary study before the main study as well as several interactions with the head of the KNUST Nursery School, and later sought permission to use the school for the study. An introductory letter to that effect from the Department of General Art Studies was submitted to the school.

Copies of the kindergarten curriculum and handbook that guide teaching and learning in the school were obtained and critically studied to identify the suggested activities that the pupils are expected to go through in line with the teaching and learning of the

English alphabet and their related sounds. A period of two weeks was used for this.

A set of the designed questionnaire was distributed personally to the 20 KG teachers for their input to the study. The researcher also observed both pupils and teachers of the Kindergarten One block. Before this the researcher briefed the respondents of the topic being studied during the distribution of questionnaire, classroom observation and the one-on-one interviews. The 26-item questionnaire was purposely distributed to twenty teachers and was retrieved on the fifth days. The interview guide that was designed to draw data from the teachers was also used to guide the interviews conducted for the study.

The researcher visited four classes in the Kindergarten One block and observed four teachers and 200 pupils, with 50 pupils in each class. The teachers were observed separately for a period of ten weeks to obtain first-hand information on how the teaching and learning of the English alphabet and sounds are done in the classrooms. The researcher also had informal conversations with 10 pupils concerning the turning of written alphabet by pupils who had these problems.

The set of 17-item interview guide that was designed for the study was used to interview the 20 teachers one-on-one for 30 to 35 minutes in each case for each respondent for a period of four weeks. The researcher later went to the teachers individually and had a conversation by asking unstructured questions to affirm information sought at the interview.

One class from Kindergarten One made up of 50 pupils were purposely chosen and 70 pupils were randomly selected from Kindergarten Two. These two groups were met twice separately in a week for between 45 minutes and one hour. The pupils were assessed before, during and after the intervention. The researcher spent 36 weeks to meet the pupils for the intervention.

In all a period of 52 weeks and five days was spent on meta- analysis or achievement test, questionnaire, observation, interview and quasi-experiment activities meant to gather data for the data.

3.8   Validation of Research Instruments

The type of instrumentation used for this study was made possible after consultation with research fellows, lecturers and the research supervisors. The value of questionnaire and interview guide for the study was achieved after discussions with research fellows, lecturers and the research supervisors. They assessed the questions based on the objectives, research questions as well as the literature support.

3.9   Data Analysis Plan

Data analysis, according to Pope, Mays and Sue (2000), is a methodical procedure whereby the researcher carefully chooses, groups, associates, analyses and synthesizes as well as interprets data to offer a vivid account of a phenomenon of interest under study. The SPSS software was used to generate percentages from the results of the achievement test. The purpose of analysis was to express the data in a way that is rationally digestible.

After the collection of the primary data, the researcher grouped the information gathered into sub-headings considering the questions brought forth based on the research questions for the study. The tabular formula was adopted and used to present the sub-headings in the analysis draft of the research report for easy description.

Information gathered from the interview and questionnaire was processed using the SPSS (Statistical Package for the Social Sciences) analysis software. The reason for this was that the research was comparing the usage of the existing strategies and new approach and their impact on pupils' performance in the study. The details of these are provided in Chapter Four.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Overview

This chapter presents the findings derived from analyzing the data gathered through critical study of the Handbook and Curriculum for Kindergarten education in Ghana, classroom observations, questionnaire administration, interviews, and achievement test administered to find out how teaching and learning of the English alphabet and their sounds is done at the KNUST Nursery School. The presentation is done according to the objectives of the study as indicated in Chapter One.

4.2 Characteristics of KNUST Nursery School

This section provides details of the study school, the curriculum followed, the learning environment and facilities available for teaching and learning pre-reading and pre-writing skills.

4.2.1 The KNUST School

The school is situated in an enclosed area on the Kwame Nkrumah University of Science and Technology campus. It is located on the same site with the former KNUST Senior High School, with the Economics Department of the Faculty of Art on the south side. KNUST Nursery School was established in the early 1960s as a private school to provide education for the children of the university staff. As the KNUST Basic School was absorbed into the public school in the early part of the 1980s, the school began enrolling children whose parents were not university staff. The status of the school was changed to become a Private school in the 2005/2006 academic year when the capitation grant was introduced in Ghana.

The school has eight classes: four for Kindergarten One (KG 1) and four for Kindergarten Two (KG 2). The school has a big compound with many fixed and movable play equipment and facilities. It is managed by a head, teaching and nonteaching staff that include attendants who work alongside the teachers and attend to the children's needs during and after classes. The teachers are graduate teachers who specialised in early childhood education in University of Education, Winneba (UEW). Teachers of the school mostly undergo in-service training and education organised by either the Ghana Education Service or the Quality Assurance and Planning Unit of the Kwame Nkrumah University of Science and Technology in a form of summer school for its workers.

Admissions of pupils to the school are done by an Admissions Committee appointed by the KNUST Basic School Management Board. Pupils of the school are mostly admitted to the school through the purchase of admission forms. Children to be admitted to Kindergarten One in the study school should be at least 3 years and nine months by the December of the year of entry. The admission process starts with parents buying forms that parents fill with the bio-details of the children they wish to register. The names of children who qualify are shortlisted and the list is displayed on the school's notice board by the Head for parents to check their wards' names to start the admission process.

4.2.2 The KNUST Nursery Curriculum

The curriculum that guides teaching and learning in KNUST Nursery School is the one designed for kindergartens in Ghana by the Curriculum Research and Development Division (CRDD) of the Ghana Education Service (CRDD, 2006) which is supplied to basic schools in Ghana. The curriculum spells out the rationale, general aims, areas of learning and experience, pre-requisite skills, time allocation, suggestions for teaching, attitude and process skills, and forms of assessment specified for kindergarten education. Details of the curriculum are described in the following sections.

Objectives of the Kindergarten curriculum

The Ghana Kindergarten Curriculum (CRDD, 2006) indicates that children enter Kindergarten with tremendous informal experiences covering various areas of human experiences. It is therefore important to identify these areas and create conditions favourable for their consolidation and expansion. The curriculum recognises the principles that children at age four learn by 'doing' therefore they should be provided with expressive activities that demand their participation in all learning. The CRDD explains that this lays a good foundation for later experiences in learning.

General Aims of the curriculum

The Kindergarten curriculum is designed to help children to:

- Familiarise themselves with the environment and its living and non-living components.

- Learn to live a healthy life.

- Develop their psychosocial competencies such as assertiveness, self-confidence and relate positively with others.

- Awaken and develop their potential creative abilities.
- Respond emotionally and intellectually to the world around them, through music and dance.

- Appreciate and find pleasure in their creations and that of other pupils.

Areas of Learning and Experiences

In order to attend to individual needs and offer kindergarten children opportunity to achieve their full potential, the curriculum has outlined six areas of learning experiences, which should be taken care of throughout the teaching situations. The areas are:

- Language and literacy

- Environmental studies

- Mathematics

- Creative Activities (Music and Dance and Art)

- Physical Development

- Psychosocial skills (cuts across all areas).

Pre-Requisite Skills

The CRDD (2006) curriculum expects kindergarten teachers to include the pupils'
previous knowledge and experiences they had gathered from home and nursery (day
care) school in their activities in order to cater for the children's current interests and
individual needs. This role is intended to be a key consideration by the teachers.

Use of previous knowledge in lessons was mostly observed during 'News time' on
Monday mornings and during conversation lessons. In this line ideas derived from the
pupils conversation were mostly based on their environment, home and either church
or the mosque. For example, during news time, the pupils were mostly asked to tell
what they heard at either church or mosque. Also during conversation on the topic

'uses of water', the pupils were asked to bring out ideas from the household activities
such as washing, bathing, cooking, mopping, watering lawns and flowers.

In line with pre-writing lessons, the teachers believed that the pupils' knowledge of the
English alphabet that they had learned through recitation of the letters at the nursery
(day care) level served as adequate previous knowledge for the KG teachers to introduce
them to the actual letters and how they are written.

Organisation of the Curriculum

The curriculum is designed to cover the child's two years of study at the kindergarten.
The curriculum stresses that children should be put at the centre of all activities. Themes
and experiences identified for children in kindergarten are intended to make the children
develop healthy lifestyles. The themes specified in the curriculum have been organised
in such a way that learning starts from the known to the unknown. For children to have
an enjoyable pre-school life therefore, the curriculum ensures that all areas and of

learning and experiences are coupled with the prescribed child-centred approach to prepare the children for a routine and formal education.

Time Allocation

The curriculum suggests that all areas may be allocated block (double) periods of sixty (60) minutes to allow for preparation, delivery and closure of lessons. This is because children need a lot of time for every activity provided in the curriculum.

A careful study of the school timetable revealed that most of the periods are allocated thirty (30) minutes each with the exception of Language and Literacy on Mondays and Tuesdays; Creative Activity on Wednesdays; and Maths on Thursdays though the CRDD curriculum for kindergarten (2006) suggests that all content areas must be allocated double periods of sixty (60) minutes. It was also observed that no matter the effort put in by the teachers during the teaching periods, not all the instructional time was used in teaching. This was largely due to special attention given to pupils with peculiar needs. When this situation was probed, all the 20 teachers (100%) indicated that the pupils work slowly in the early part of the academic year and most of them need individual attention to learn what they are taught but also said that most of their pupils pick up in the subsequent terms and so they are able to do more work to cover the periods of the timetable.

Suggestions for Teaching

The curriculum specifies five distinct sections that should guide teaching. They are:

- Unit or topic which specifies the knowledge and skills to be learnt.
- Specific objectives for each unit or topic: what the child will be able to do after instruction and learning of the unit.

49

- Content: the selected body of information the teacher will need to use in teaching a particular unit.

- Teaching/learning activities: this ensures the activeness of children in the lesson and emphases participatory teaching and learning lessons.

- Evaluation: suggested exercises for evaluating the lesson.

These sections of the curriculum serve as a guide to teachers in their lesson preparation. It was realised from the observation that the teachers prepare weekly lesson notes as standard teacher professional practice in Ghana (Opoku-Asare, 2004; Boafo-Agyemang, 2010; Osei-Sarfo, 2012). As part of this practice, the teachers' lessons notes are inspected and marked by the head of the school every week. The lesson notes guide teaching and learning in the school.

Attitude and Process Skills

The curriculum suggests that the pupils must be exposed to situations that will challenge them to either raise questions or attempt to solve problems through the use of their senses. The curriculum therefore suggests the following situations as avenues for building process skills among kindergarten children:

- Experimenting

- Observation

- Manipulation

- Communicating

- Curiosity

- Perseverance

- Concentration

- Self-confidence

- Assertiveness

Form of Assessment

The curriculum (CRDD, 2006) cautions teachers not to assess pupils at this level in the formal way of writing examinations in order to grade the children; they are to assess them by the informal methods that include observation and conversation.

It was observed that the KG teachers assess the pupils using a designed assessment booklet for kindergarten endorsed by the Ghana Education Service. This is based on all the learning areas – mathematics, pre-reading, pre-writing, creative activities, environmental-social, building healthy individual and physical as specified by the curriculum. Topics under these learning areas are outlined in this booklet which requires teachers to critically observe the pupils during the teaching of these topics and to assess them based on how active they are during lessons in relation to these outlined topics. The observation revealed that the teachers assess the pupils in all three learning sections and report on them for term one, term two and term three, that is for the whole year. Words used to describe the pupils' performance by the teachers include 'Very Good', 'Good' 'Needs Improvement' and 'Needs Special Attention'.

The teachers indicated that the pupils are promoted to Primary One from KG2 based on the teachers' evaluation reports on the pupils' ability to read and write the letters of the alphabet and their associated sounds as well as the numerals.

4.2.3 The Classroom Environment

The classroom is a room dedicated primarily to teaching or learning activities. It is a place or space where learners and teachers interact with each other and use a variety of tools and information resources in the pursuit of learning activities (Dudek, 2000, Khine

& Chiew, 2001 as cited in Hateka, 2014). The classroom therefore requires a conducive environment for teaching and learning to go on. Considering the classroom environment for children, the CRDD (2006) suggests that colourful picture charts, games and other learning materials should be made available to arouse the children's interest in the learning process.

The school has eight classes. This is made up of four classrooms for Kindergarten One (KG1) and named as KG1A, KG1B, KG1C and KG1D. The other four classrooms for Kindergarten Two (KG2) are also named KG2A, KG2B, KG2C and

KG2D, which enables the pupils to easily identify their classrooms. All the eight classes are provided with two storage cupboards in which pupils activity books, exercise books, crayons, pencils and other useful materials are kept.

The classrooms are painted in different colours. Each class is differentiated by the colour of the classroom. For example the KG 1A and 2A classrooms are painted blue while that of KG 1B and 2B are yellow; KG 1C and 2C had been painted purple and 1D and 2D have pink paint. Although the questions on the rationale for using different colours for the classrooms and furniture was not asked of the respondents, including the head of the school, it was observed that the colour differences helped the young pupils, especially those in KG1, to differentiate between the classrooms and also find their way around easily.

The school also uses two kinds of furniture: round tables and long rectangular tables but with the same type of chairs. The perimeter of the classroom determines the kind of furniture to be used by the pupils. Three classes - KG 1A, 1B and 1C use both the round and rectangular tables while five classes - KG 1D, 2A, 2B, 2C and 2D use only the

rectangular tables that are arranged in rows with pupils sitting on three sides facing the chalkboard as seen in Plate 4.1.

Plate 4.1: Pupils in KG 1A class
Source: Fieldwork, 2014

4.2.4 The School Timetable

There is a timetable that guides all school activities. Each class in the school is guided by the activities listed on the timetable supplied by the school. Figure 4.1 shows the timetable for Kindergarten One and Two.
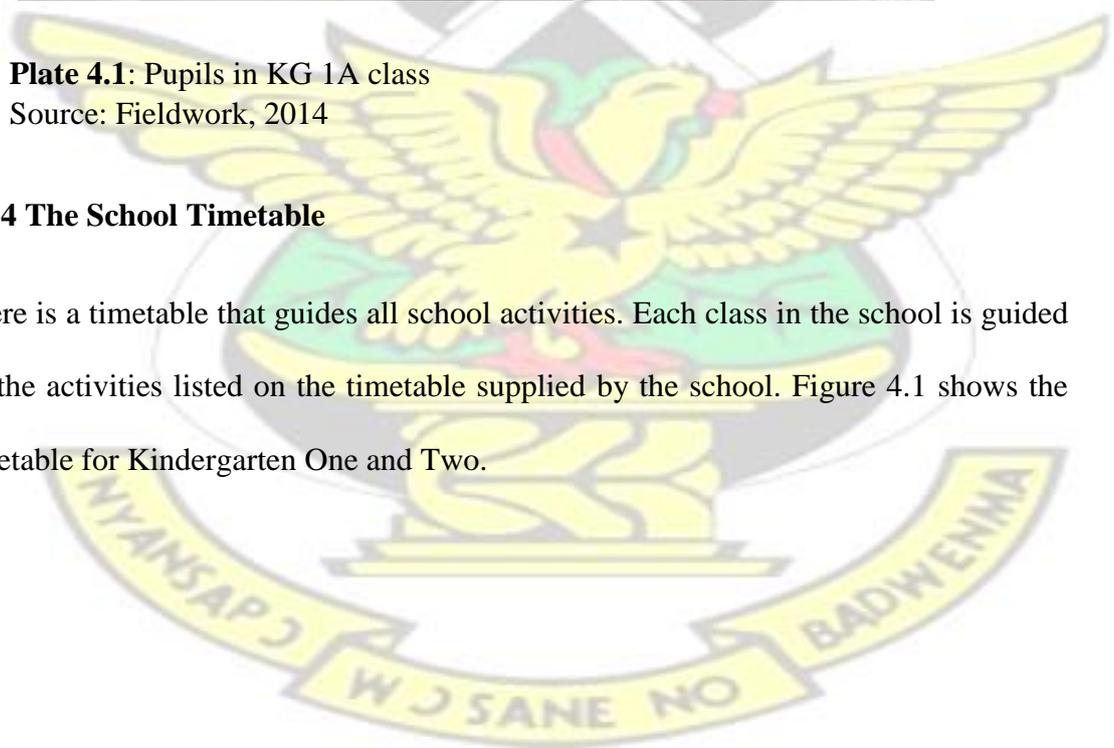
TIMETABLE FOR KINDERGARTEN ONE AND TWO

DAY	7:30 - 8:30	8:30 - 9:00	9:00– 9:30	9:30– 10:00	10:00 – 10:30	10:30 – 11:00	11:00 – 11:15	11:15– 11:45	11:45– 12:15	12:1 512:30	12:0- 1:00
			30	30	30	30	15	30	30	15	30
MONDAY	Arrival and Play	Assembly and Registration	Language & Literature		SNACK	OUTDOOR GAMES - Break	WASHING OF HANDS AND REST	Maths	Envt Building Healthy Individual	DRESSING AND CLOSING	LUNCH
TUESDAY			Lang. & Lit.	Lang. & Lit.				Maths	Envt physical		
WEDNESDAY			Music & mov't	Lang. & Lit.				Creative activities			
THURSDAY			Music & mov't	Envt.				Maths			
FRIDAY			Games	Lang. & Lit.				Env't social	Lang. & Lit. Story telling		

Figure 4.1: Time Table for KG One and Two
Source: Fieldwork, 2014

The school timetable (Fig. 4.1) shows arrival of pupils to the school fixed from 7:30am to 8:30am which is followed by Assembly and registration from 8:30am to 9:00am. The pupils and teachers start the first lesson every day at 9:00am. On Mondays the timetable indicates Language and Literacy (News time) during which the pupils are engaged to bring out what they learnt at both the church and at the mosque during the weekend; Maths and Environmental Studies (building a healthy individual). On Tuesday, active lessons start with Language Activity, Maths and Environmental Studies (physical activity). Wednesday's activities start with the learning of Music and Movement which the whole school participates in. This is followed by Language and Literacy (rhymes)

and Creative Activity. On Thursday, lessons start with Music and Movement, followed by Environmental Studies and

Maths. Friday lessons starts with Physical development/Games. Pupils use their 'Friday wear' (Physical Education kits) for this activity. This is followed by Environmental Studies and Language and Literacy (story telling). The pupils usually have their snack time from 10:00am-10:30am each day. This is mostly followed by break time from 10:30am to 11:00am and washing of hands and rest from 11:00am to 11:15am.

4.2.5 Instructional Periods for the teaching pre-reading and pre-writing

With regards to the school timetable Language Literacy appears on Mondays (60 mins.), Tuesdays (60 mins.), Wednesdays (30 mins.), Fridays (60 mins.). A careful study of the school timetable also revealed that most of the teaching periods were 30 minutes with the exception of Language and Literacy for Monday and Tuesday; Creative Activity for Wednesday and Maths for Thursday although the CRDD curriculum for kindergartens (2006) suggests that all areas must be allocated double periods of 60 minutes. It was however, observed that no matter the effort put in by the teachers, teaching did not take place in all the periods allocated for the activities. This was largely due to special attention that the teachers have to give to pupils with peculiar needs. When this situation was probed, all the 20 teachers (or 100%) of the respondents indicated that some of the pupils work slowly during the early stages of the academic year as they begin to learn how to read and write so most of them need individual attention. They however, explained that but most of the pupils speed up with their works during the third term.

When the teachers were asked if they had enough periods for the teaching of prereading and pre-writing, all the 20 teachers were of the opinion that the pupils work in eleven (11) different activity books every week and for that matter, the periods allocated on the timetable is inadequate for what they have to do daily.

4.3 Objective 1: To identify the teaching and learning materials available for teaching pre-reading and pre-writing skills in KNUST Nursery School

1. Instructional materials

The suggested instructional materials for teaching the letters and sounds of the alphabet, according to the Curriculum for Kindergarten of CRDD (2006, p. 16) include paper, chalk, charcoal; chalkboard, crayon, sand, pencil, leaves, punched papers, and the hands. The school observation revealed that KNUST Nursery School have Teachers' Guide, Pupils' Activity Books and the Curriculum for Kindergarten. These three books are provided by the school to every teacher to serve as reference materials to aid teaching and learning in the school. Plate 4.2 shows some Teachers' guide for teaching in the school.
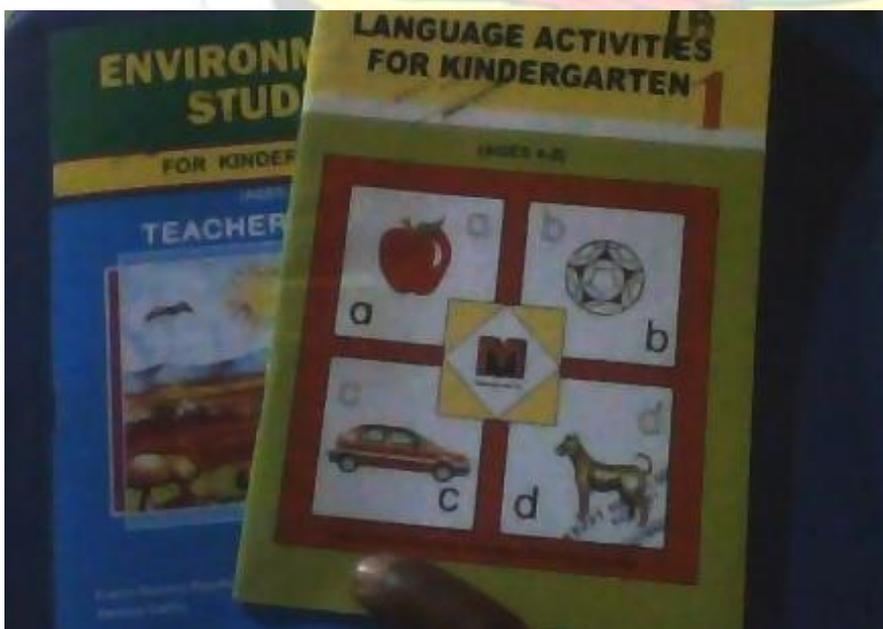
Plate 4.2: Some Teachers' guide.
Source: Fieldwork, 2014

The pupils buy their own activity books. This comprises Language Activities, Environmental Studies, Writing, Creative Activity and Mathematics books. The teachers' guide and pupils' activity books were published and distributed by the Masterman Publications Limited based on pupils Activity books. The Ghana Education Service supplies the school with the curriculum. The school provides each pupil with the required exercise books for other class activities. These instructional materials mostly aid the teachers and pupils in the teaching and learning process.

The teaching and learning materials that were observed in use by the teachers and pupils for pre-reading and pre-writing in the school are mostly two dimensional objects. The materials include: wall charts, clocks, flash cards, and hanging boards showing numerals from 1 to 20, and the English alphabet from A to Z with associated sketches for each alphabet. Those that the teachers use to teach the letters of the alphabet and their related sounds specifically are textbooks, crayons, flash card and alphabet charts. Plates 4.3 – 4.5 show some of them.
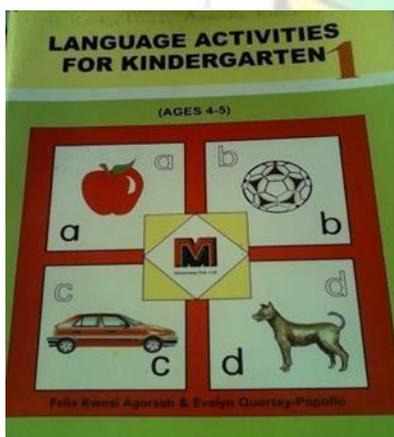
Plate 4.3: Pupils' language activity book.   **Plate 4.4**: Alphabet chart.
Source: Fieldwork, 2014   Source: Fieldwork, 2014

Plate 4.5: Pupils use crayons for colour work.
Source: Fieldwork, 2014

2. How teachers use available Teaching and Learning materials to deliver lessons at the KNUST Nursery School

Teachers at the KNUST Nursery School use wall charts, pictures, board illustrations, and real objects among others to boost or reinforce the pupils' understanding during pre-reading and pre-writing activities. It was observed during a pre-reading lesson on the topic 'Matching letters to pictures', a KG 1 teacher used real objects - bucket, tomatoes, a ball, table fork together with chalkboard illustrations and pictures in the pupils' activity books as her instructional materials. The activities she used included the pupils identifying pictures, illustrations or real objects, repeating the sounds that begin with specific letters them, finding the beginning letters and drawing a line to match the picture and the letter.

It was observed that the pupils were actively involved in the lesson such as identifying objects, writing the beginning sound of the names of objects on the board, as well as matching pictures and letters as seen in Plate 4.6. Each pupil was seen trying hard to perform an activity. Most of the pupils knew what they were about. The pupils later matched the letters and pictures in their activity books.

When the teacher was later asked why she used teaching and learning materials (TLMs) in delivering her lesson, she responded that the use of TLMs erase the difficulty pupils have and enhance their understanding and also makes lessons very concrete since teaching at this level is very difficult. She also commented that marking pupils' work right after the lesson boosts the pupils' morale and motivate the slow writers to work faster.
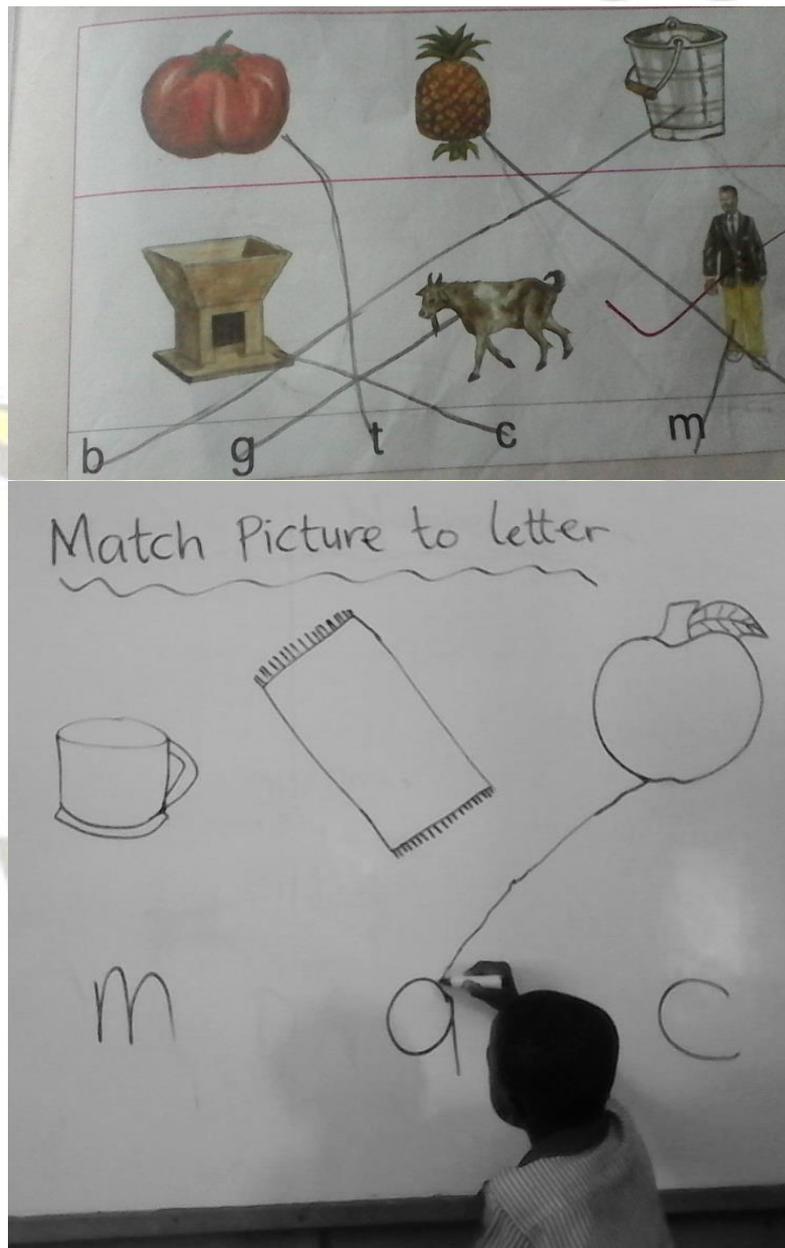
Plate 4.6: Pupils matched pictures and letters.
Source: Fieldwork, 2014

It was observed in the other seven classes of the school that the teachers used the existing teaching and learning materials together with chalkboard illustrations to boost pupils' understanding in their various classrooms. The observation also revealed how the pupils learned the letters of the alphabet and the related sounds using the available teaching and learning materials. Six out of the 20 teachers (representing 30%) reported that they teach by first letting their pupils write the letters in the air and in the sand tray as pupils repeat the letter names and sounds after the teacher; two of the teachers (representing 10%) stated that their pupils were made to observe written letters on the board and repeat letter names and sounds after the teacher. Again, four out of 20 teachers (representing 20%) stated that they use patterns to teach the writing of the letters and have their pupils repeat the letter names and sounds after them.

Another five out of the 20 teachers (representing 25%) mentioned that their pupils scribble, use the pattern to write the letters;, they trace letters in the sand tray and write in their books; three of them (forming 15%) stated that their pupils sing a song about the alphabet, write the letters in the air, sand tray, slate and in their books. Lastly, 14 of the 20 teachers interviewed (representing 70%) stated that their pupils write the letters in the sand tray when they are teaching them the letters and sounds.

The responses gained from both observation and interview above create an indication of the variety of teaching and learning materials that they use to meet specific needs of their pupils. However, two sand trays that were found in two separate classrooms in Kindergarten One block could probably be the same ones Yorke (2012) found in the school that were being used to carry pupils' bags (see Plate 4.7) instead of serving as a teaching and learning resource for the pupils' pre-write and pre-reading development.

Plate 4.7: Sand tray for carrying bags
Source: Yorke, 2012

3. Impact of Teaching and Learning Materials on Pupils after lesson

Some pupils were observed learning or revising what they had been taught with classmates after school in their various classrooms mostly by using the charts, alphabet and numeral wall hangings. The TLMs created space for the slow learners to catch up while waiting to go home because some pupils learn best from their colleagues. Although the pupils used the chorus form of learning, the assumed leader of the team tried to correct the friends whenever one went 'wrong' and this motivated other pupils to join them. The abandoned sand trays could serve this same purpose.

4.4 Objective 2: **To describe the teaching strategies KG 1 and KG 2 teachers in KNUST Nursery School employ in the teaching pre-reading and pre-writing skills and assess effectiveness of these approaches.**

1. Observed teaching strategies

With respect to the items that made up the questionnaire and interview guide, the 20 teacher respondents in the study school gave diverse answers to show the differences in their approaches to teaching. The responses to the interview questions indicated that 30% (6 out of the 20 teachers) used pattern, 35% (7 out of 20) used scribbling and pattern, 10% (2 out of 20) used pattern and drawing, 5% (1 out of 20) used scribbling and writing in the air, 10% (2 out of 20) introduced the letters and sounds and write in the air with the body, 5% (1 out of 20) used demonstration and child-centred approach while 5% (1 out of 20) of them used pattern and flash cards. However, responses from the questionnaire showed a different dimension: 5% (1 out of 20) reported using assorted instructional materials, 40% (8 out of 20) cited pattern, songs and rhyme, 10% (2 out of 20) mentioned using a phonic book, 40% (8 out of 20) cited pattern, and 5% (1 out of 20) cited having the pupils repeat the names of the letters and sounds of the alphabet after her.

It was interesting seeing the teachers using different teaching strategies even though they were preparing the pupils for Class One of KNUST Primary School. This means the children will acquire different sets of skills and experiences at the kindergarten. In the observation that took place in all the four classes at Kindergarten One in relation to the learning of reading and writing of the alphabet and their sounds, it was realised that the teachers used the patterns which constituted scribbling, the strokes and curves, joining of the curves and strokes to form letters, and learning of letter names and sounds

through the singing of songs. An example is the joining of small letter 'c' to small letter 'l' to form letter 'd', joining small letter 'l' to two reversed letter 'c' stacked one on top of the other to form capital letter 'B' and small letters 'c' and 'l' to form small letter 'a'.

The observation made from the activities for teaching pre-reading and pre-writing showed that the teachers take the pupils through some finger and wrist movement exercises using scribbling, writing of strokes and curves, colouring, tracing and lacing such as seen in Plates 4.8 and 4.9.
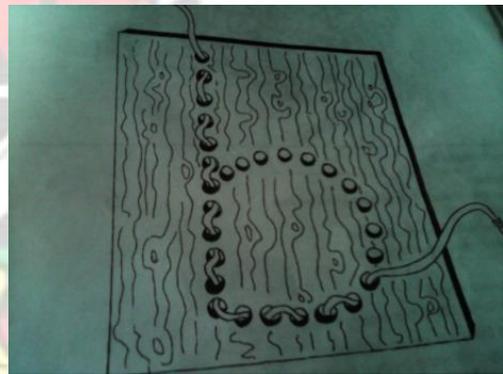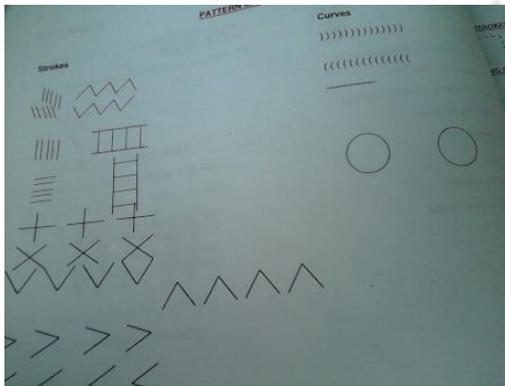
Plate 4.8: Curves and Strokes (CRDD) **Plate 4.9**: Lacing of letter B (Handbook)
Source: Fieldwork, 2014   Source: Fieldwork, 2014

Table 4.2 shows the procedure used by the observed teachers to teach the letters and sounds of the English alphabet at the KNUST Nursery School during the study.

ACTIVITIES	PROCEDURE
Activity I	Scribbling
Activity II	Writing of Patterns (strokes & curves)
Activity III	Joining of Patterns (strokes & curves) to form the letters (either lower case or upper case).
Activity IV	Teach letter names and sounds through a song.

Table 4.2: Teaching and learning procedure by teachers in KNUST Nursery School
Source: Fieldwork, 2014
Plates 4.10 **-** 4.15 show some procedures the sampled teachers use in the study school.
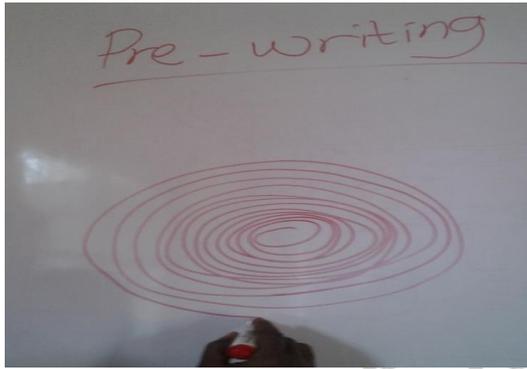
Plate 4.10: A Teacher Scribbing
Source: Fieldwork, 2014
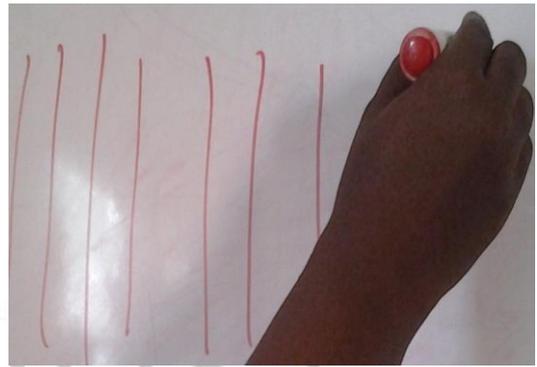
Plate 4.11: Tracing of Strokes
Source: Fieldwork, 2014
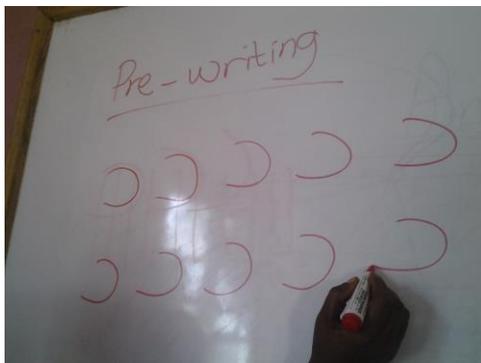
Plate 4.12: Writing of Curves
Source: Fieldwork, 2014
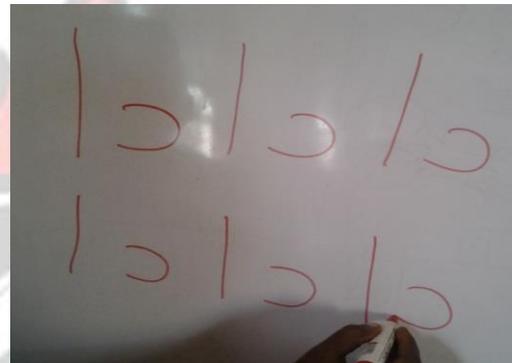
Plate 4.13: Writing of strokes and curves
Source: Fieldwork, 2014
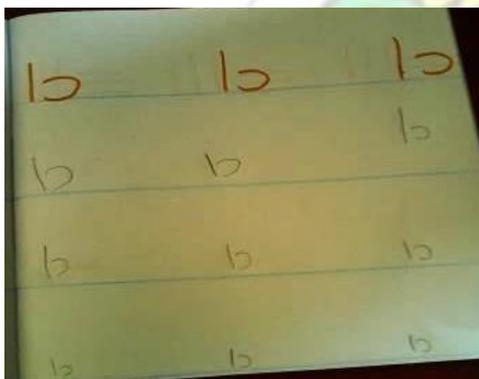
Plate 4.14: A pupil's writen Strokes and Curve
Source: Fieldwork, 2014

Plate 4.15: Joined Strokes and Curves
Source: Fieldwork, 2014

In line with the activities, the study also revealed that the pupils engage in other learning

activities that include the pupils first scribbling and then tracing the strokes and curves

of the letters of the alphabet in the air, then writing on their slates and then in their

exercise books. Other activities that were noticed were colouring, tracing, matching and

filling in blank spaces on the chalkboard using flash cards. Plates 4.16 – 4.18 show some activities the pupils were taken through by their teachers.

Plate 4.16: A pupil colouring the letter 'F' **Plate 4.17:** A pupil filling in a blank space
Source: Fieldwork, 2014   Source: Fieldwork, 2014
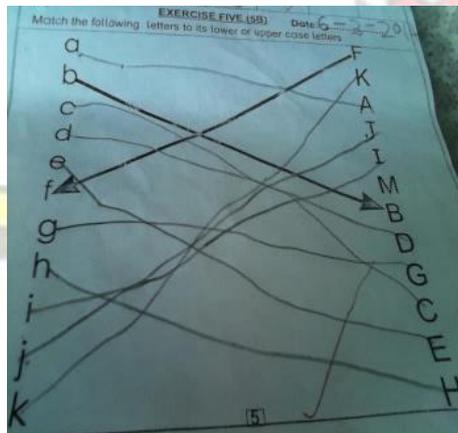
Plate 4.18: Matching activity with alphabet and sounds
Source: Fieldwork, 2014

2. Impact of existing Teaching Strategies on Pupils' Performance

The study revealed that the method used by teachers to teach the letters and sounds of the alphabet in pre-reading and pre-writing had some challenges. Responses from the interviews conducted showed some challenges teachers face in teaching the letters of the alphabet and related sounds as follows: 2 of the 20 teachers (representing 10%) reported that some pupils cannot write at all; 15% (or 3 out of 20 teachers) said some children cannot hold chalk and pencils to write so they cannot turn their wrists; 30% (6 out of 20) of the teachers stated that some pupils wrote reversed letters due to their

seating arrangement- some pupils sit in rows while others sit around tables; 10% (2 out of 20) teachers commented that some pupils cannot associate the letters and sounds while 30% (6 out of 20) indicated that large class size of 50 to 55 pupils in one class as well as inadequate instructional materials were the cause for some pupils' inability to grasp the letters and sounds of the alphabet. 5% (1 out of 20) teachers indicated that each pupil in the school uses at least eleven activity books and for that matter teachers find it difficult to attend to pupils regularly.

The teachers gave the following lowercase letters that the pupils had challenges with as 'b' and 'd', 'p' and 'q', 'm' and 'n', 'j' and 'l', 'i' and 'l', and 'k'. The researcher set aside separate time to visit each of the four classes to observe how pupils work. The observation showed four categories of pupils: 60 out of 200 pupils (representing 30%) could write and identify the letters and sounds of the alphabet. Forty out of 200 (representing 20%) pupils reversed some of the lowercase letters, for example 'p' and 'q', 'b' and 'd'. Twenty out of the 200 pupils (representing 10%) could not handle either chalk or pencil and cannot turn their wrists and write at all. Eighty out of the 200 pupils (representing 40%) could not associate the alphabets and their related sounds.

Plates 4.19 – 4.21 show three sets of pupils' work: Plate 4.19 represents those who wrote the alphabet in their own way, Plate 4.20 represents those who wrote the alphabet correctly and Plate 4.21 represents those who turned written letters.
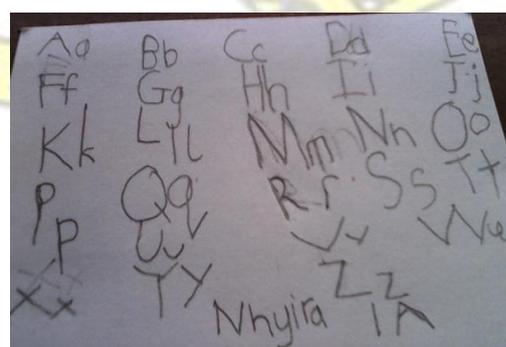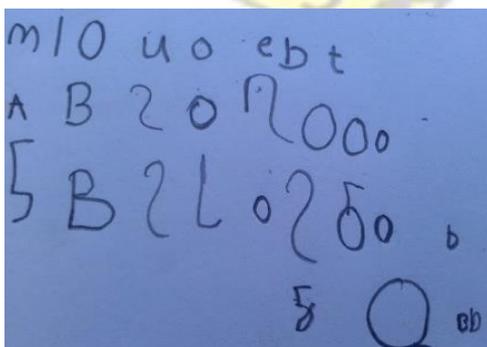
Plate 4.19: A KG2 girl's written alphabet. **Plate 4.20**: A KG1 girl's written alphabet
Source: Fieldwork, 2014   Source: Fieldwork, 2014
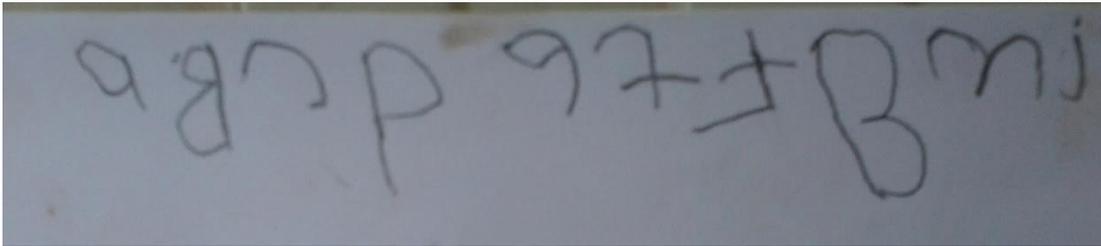
Plate 4.21: A KG1boy's written alphabet
Source: Fieldwork, 2014

Based on the limitations that were observed from the learning activities the pupils did, some kinaesthetic activities were designed to help the pupils gain more knowledge and skills from the teaching and learning activities. The various activities have been described in the following sections, which explain how Objective 3 of the study was achieved.

4.5 Objective 3: To introduce kinesthetic activities that can be used as Art therapy tools to improve pupils' performance in pre-reading and pre-writing among Kindergarten pupils.

1. Considerations for designing the kinaesthetic intervention

According to Willingham (2010), children learn more and effectively when they employ at least two of their senses. The researcher in her quest to achieve the third objective used the kinesthetic approach to teaching as art therapy tool to introduce the 120 selected pupils to new intervention activities that were based on the three groups of learners as pointed out by Heacox (2002) and Willingham (2010):

- Visual learners: those who learn by observing what is being taught.

- Auditory learners: those who learn by hearing what is being taught.

- Tactile learners: those who learn by touching what is being taught.

The research activities also considered the application of the theory of multiple intelligences (Gardner, 1983, 1993 as cited in Agbenatoe, 2011) so that almost all the intelligences the children exhibit might be catered for in the intervention lessons since people learn in different ways. The intervention lessons were therefore designed in the form of practical activities for the teaching and learning of the alphabet and their associated sounds. This was done to aid or enhance the pupils' understanding of the learning process while using familiar art materials.

The pupils who participated in the study are all Ghanaians but they are different as they come from different ethnic groups that belong to different parts of the country as well as belief systems. As Sue & Sue (1990) indicate, different cultural backgrounds and customs, values, and traditions are found in the school environment. This is true of KNUST Nursery School where the pupils represent the Fante, Asante, Ewe, Ga and other northern Ghana ethnic groups; they are also Christians and Muslims. This is why Elliot et al (2000) say that the classroom is a place where cultures merge. The intervention activities therefore catered for cultural as well as learning differences to reflect different ways in which visual, auditory and kinaesthetic learners grasp what is taught (Heacox, 2002). Another major factor was the multiple intelligences (Gardner, 1983 as cited in Agbenatoe, 2012) that pupils bring to the classroom. This was done in order to be able to reach all the pupils in all the activities.

2. **The Schedule of intervention activities**

Table 4.3 gives the details and schedule of the intervention activities.

WEEK	INTERVENTION	PUPILS' ACTVITIES	INTERVENTION ACTIVITIES	TEACHING AND LEARNING MATERIALS	DURATION
Week 1	Pre-test to assess alphabet and sounds performance	Both KG 1&2 took the pre-test	Researcher conducted and marked Pre-test	Alphabet Table and plastic modelled alphabet	45 minutes
Weeks 3&4	Showed motivational movie to pupils	Both KG 1&2 watched movie	Introduced the movie for pupils to view	Laptop and projector	60 minutes
Week 5	Discussion on the movie	Pupils discussed the movie	Discussed lesson learnt from the movie	Pictures	60 minutes
Week 6	Used beans to broaden pupils concept of letter 'A'	Pupils wrote 'A' on paper and arranged beans 'A'	Introduced letter 'A' on board. Monitored pupils writing & demonstrated beans 'A' to pupils	Beans	60 minutes
Weeks 8, 9, 10, 12, 27&30	Used clay dough to broaden pupils concept of letters 'C, D, E, V& Y'	Pupils wrote 'C, D, E, V& Y' on paper and used clay coils for the above letters	Introduced the concept. Demonstrated and monitored pupils in coming out with their arranged letter	Clay dough	50 minutes
Week 11	Used sea shells to broaden pupils concept of letter 'F'	Pupils wrote 'F' on paper and used shells to arranged letters 'F'	Introduced the concept. Demonstrated and monitored pupils arranged the shell 'F'	Sea Shell	50 minutes
Week 13	Used biscuits to broaden pupils concept of letter 'H'	Pupils wrote 'H' on paper and used biscuit for letters 'H'	Introduced the concept. Demonstrate and monitored pupils in	Biscuits	50 minutes
			using 'subtraction' concept with their biscuits		

69

Week 14	Used straws to broaden pupils concept of letter 'I'	Pupils wrote 'I' on paper and used coloring and arrangement of straws for letters 'I'	Introduced the concept. Demonstrate and monitored pupils in using arrangement of straws for letters 'I'	Plain sheet, crayons, pencil, straws, scissors and glue	80 minutes
Weeks 15, 21 & 31	Used drawing activities to broaden pupils concept of letter 'J, P & Z'.	Pupils themselves drew from memory.	Introduced the concept and monitored pupils in drawing from memory.	Plain sheets, crayons, pencils	45 minutes
Week 16	Used colouring and direct printing with sharpener to broaden pupils concept of letter 'K'	Pupils used colouring and direct printing of letter 'K' with sharpeners	Introduced the concept. Demonstrate and monitored pupils in using colouring and direct printing of letter 'K' with sharpeners.	Plain sheets, crayons, pencils and sharpener	60 minutes
Week 17	Used plain weave activities to broaden pupils concept of letter 'L'	Pupils used coloured and plain sheet for plain weave of the letter 'L'	Introduced the concept. Demonstrate and monitored pupils in using plain weave of the letter 'L'.	Plain sheets, coloured sheets and pencils	60 minutes
Weeks 18&19	Used collage activities to broaden pupils' concept of letter 'M & N'	Pupils used broken shells, pebbles, etc. for collage letters 'M & N'	Introduced the concept. Demonstrate and monitored pupils using broken shells, pebbles, etc. for collage letters 'M & N'.	Plain sheets, crayons, pencils, pebbles, cut-out coloured papers and seeds	60 minutes
Weeks 20&29	Used Styrofoam and clay dough to broaden pupils	Used subtractive approach with Styrofoam and	Introduced the concept. Demonstrate and	Clay dough, finger and	50 minutes

	concept of letters 'O & X'	clay dough for letters 'O & X'	monitored pupils Using subtractive approach with Styrofoam and clay dough for letters 'O & X'.	Styrofoam	
Weeks 22, 23 & 26	Used colouring and erasing to broaden pupils concept of the letters 'Q, R & U'	Pupils used colouring and erasing for the letter 'Q, R & U'	Introduced the concept. Demonstrate and monitored pupils in using colouring and erasing of letters 'Q, R & U'	Plain sheets, crayons, and erasers	50 minutes
	Used appliqué to broaden pupils concept of letter 'S'	Pupils used appliqué using plain and coloured cloths for the letter 'S'	Introduced the concept. Demonstrated and monitored pupils in using plain and coloured cloths for the appliqué letter 'S'.	Plain cloth, coloured cloth, glue and scissors	60 minutes
Week 25	Used music and dance to broaden pupils concept of letter 'T'	Pupils used music and dance for the letter 'T'.	Introduced the concept. Demonstrate and monitored pupils in using music and dance for the letter 'T'	Table, pupils and stick	60 minutes
Week 28	Used colouring and direct printing with plantain stalks to broaden pupils concept of letter 'W'	Pupils used direct printing of letter 'W' with plantain stalks	Introduced the concept. Demonstrate and monitored pupils in using plantain stalks for direct printing	Plain sheets, poster colours, plantain stalks and brushes	60 minutes

Week 32	Used 'Star Game' in the classroom.	Pupils played the 'Star Game' indoors.	Introduced the concept. Demonstrate and monitored pupils in playing the 'Star Game' indoors	Chalk	60 minutes
Weeks 33&34	Used 'Star Game' on the school compound	Pupils play the 'Star Game' outdoors	Introduced the concept. Demonstrate and monitored pupils in playing the 'Star Game' outdoors	Stick	45 minutes
Weeks 35&36	Post-test to assess alphabet and sounds performance	Both KGs 1&2 took the post-test	Researcher conducted and marked Post-test	Alphabet concept posttest	45 minutes

Table 4.3: Details and work schedule of the kinesthetic activities

Source: Fieldwork, 2014

3. Description of the Intervention

The focus of the study was to increase pupils' performance and active participation in class using a researcher designed kinesthetic activities as outlined in Table 4.3. Several forms of art activities were used together with a number of teaching methods. These included the employment of art materials like clay dough, straws, pebbles among others in various activities like colouring, erasing, collage, drawing, appliqué, among others to bridge relationship between art and literacy. Pupils were very passionate in all the activities during the intervention. The study began with consultations with the participating pupils' class teachers to gain insight into the general performance of the pupils in the school. The interaction also involved discussions on appropriate times to meet the pupils for the intervention project. The needed materials for the intervention were organized and supplied for the intervention lessons. The teachers were later informed on when activities would commence, and were encouraged to participate. Introductory letters about the study were distributed to parents and guardians through

the pupils who were selected with permission from the Head of the school to participate in the study. Thirty-six weeks were used for the intervention activities, which are described in the following sections.

Weeks One & Two: Pre- Test Assessment

Fifty (50) KG 1 and seventy (70) KG 2 pupils were assessed to find out the level of their knowledge about the letters and sounds of the English alphabet using an Alphabet Chart that was drawn on the board together with modelled plastic alphabets. The pupils were later provided with pencils and plain sheet to write the alphabets on them. The assessment results were marked and recorded by the researcher. Plate 4.22 shows an aspect of the intervention lessons.
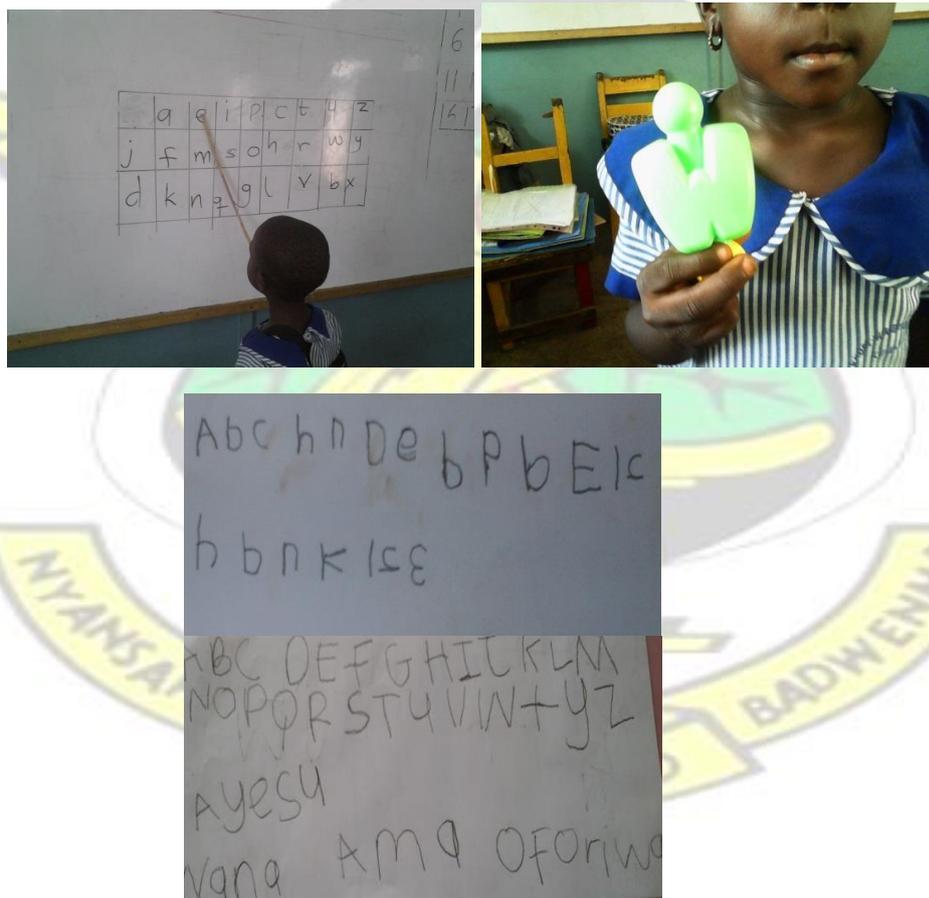
Plate 4.22: Pupils identifying letters, sounds and writen alphabet
Source: Fieldwork, 2014

Table 4.4 and Fig.4.1 show the breakdown of the pre-test assessment results.

RESULTS OF PUPILS FOR THE PRE-TEST (120 = 100%)
36 pupils (making 30%) could identify, read, and write the letters and sounds of the alphabet.
53 pupils (making 44%) could identify, read, & associate but turned written letters.
31 pupils making (26%) could identify, read, and write the letters but could not associate them to their individual sounds.

Table 4.4: Assessment Performance of Pupils
Source: Fieldwork, 2014
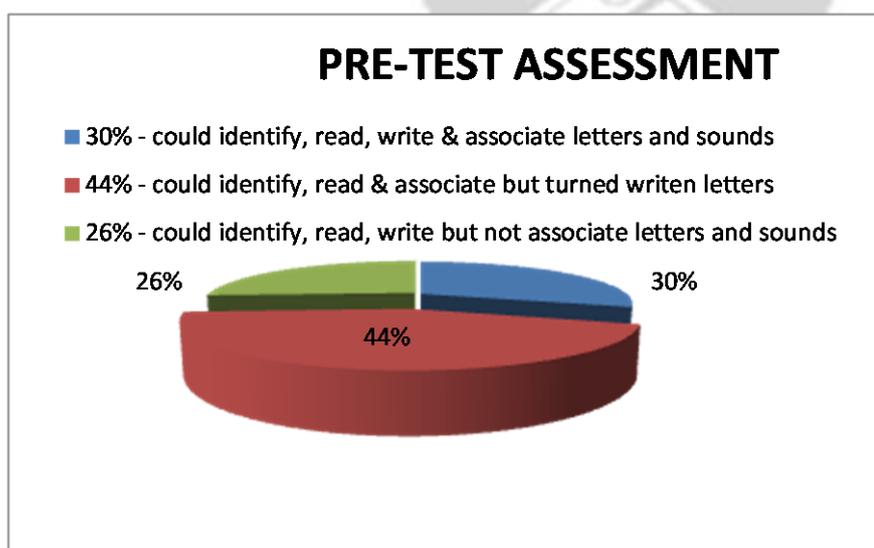
Figure 4.1: Assessment of Letters and Sounds of the Alphabet (pre-test results) Source: Fieldwork, 2014

Weeks 3 and 4: Viewing of Motivational Movie

The use of a motivational film took place in Weeks 3 and 4 of the intervention project.

Viewing of the motivational film involved 120 selected pupils. They were introduced

to an educative and motivational movie produced by Aamir Khan Productions (2007) which is titled *Taare Zameen Par* and translates as "Like Stars on Earth". The film is about an eight year old adventurous boy called Darsheel Safary (named Ishaan in the film) who was regarded as naughty and lazy both at school and at home. This boy was turning the letters of the alphabet, numerals and saw the letters dancing when he was asked to read during one of their English class.

Through the intervention of a new art teacher, also an art therapist in Ishaan's school who introduced him to the writing of the alphabet in a sand tray as well as by modelling the letters with clay dough, playing educative games on the computer, listening and learning from educative recorded materials, and the production of art works, Ishaan received help that brought out the good in him.

The teacher also employed the scaling approach to teach Ishaan to transfer letters and numerals from a larger space on the blackboard to a smaller space in his books. Although the boy was previously regarded as lazy, his parents and the school became proud of him as Ishaan became able to identify the same letters he saw dancing and could also read his book and notices that were posted on the school notice board. Plates 4.23 and 4.24 show Ishaan and his art therapist teacher.
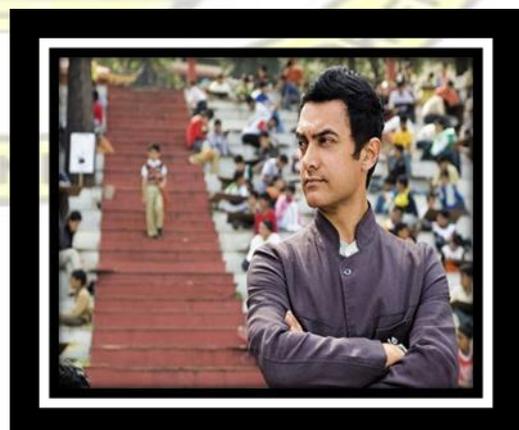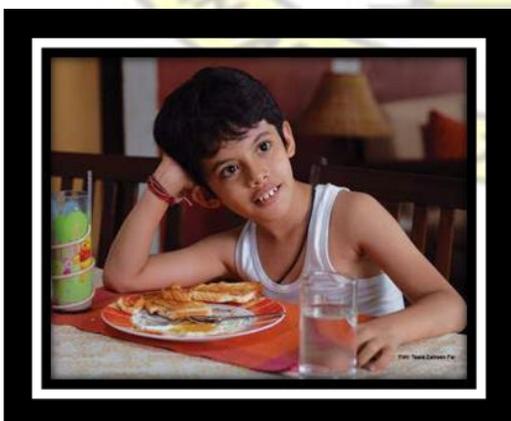
Plate 4.23: Ishaan in the film   **Plate 4.24**: Ishaan's art therapist teacher
Source: Fieldwork, 2014   Source: Fieldwork, 2014

Week Five: Discussion of the Movie

Although the writer of this movie pointed out that the movie was not to be criticized, some of the selected pupils for the study exhibited some of characteristics in the movie hence, and pupils were led into discussions about the movie afterwards. A pupil mentioned that it was important that they take good care of their pencils, books and erasers and not to throw them into the bin as Ishaan did. Another female pupil commented that pupils should not lie but always speak the truth. In the movie Ishaan lied to his teacher by allowing his elder brother to write and explain his absence from school the previous day. A Kindergarten song about being truthful was sung by the class and other comments were listened to. The entire activity lasted 60 minutes.

Research into the teaching and learning of the letters of the alphabet and their related sounds during the intervention was done in two steps: 1) using existing teaching and learning materials recommended by the Curriculum to teach the letters 'A'-'G', and 2) using new teaching approaches with new materials to teach the letters 'H' – 'Z'.

1. Teaching 'A' to 'G'

The existing instructional materials recommended by the curriculum that were not used in the school such as the sand tray, dry beans, plastic modelled letters, clay dough, the pupils' backs, seeds, cut-out-papers, pebbles, and sea shells, the pupils were introduced to some kinesthetic activities that they were not familiar with in their school activities. During the intervention, the pupils were challenged to take initiative in interacting with the assembled materials in various ways as Stevens, Werkhoven and Castelijns (2001) suggest. Table 4.6 shows the procedures used in the teaching and learning activities using the strategies they were aware of and the new approach introduced the pupils. A

letter was introduced and various activities were done for a period of 45 minutes or about one hour for every meeting day. The pupils were also engaged in the teaching and learning of the alphabet and sounds of the letters from

'A' to 'G' using the existing strategy. Table 4.6 shows the teaching and learning procedure for the intervention lessons.

ACTIVITY	PROCEDURE
Activity I	Pupils were introduced to a letter in upper case and lower case on the white board through the letter name.
Activity II	Pupils were guided to write the letter in the air, their partners' backs, in the sand tray and on their tables.
Activity III	Pupils were guided to interact with instructional materials to create letters.
Activity IV	The sound of a letter was taught through a song created by the researcher.
Activity V	Pupils identify the taught letter and its sound from among plastic models of the alphabet.
Activity VI	Ruled sheets (similar to pupils' writing books) were provided for pupils to write both the lower and upper case of the taught letter.

Table 4.5: Teaching and Learning Procedure for the Intervention Lessons Source: Fieldwork, 2014

Week Six: The Beans Method for letter 'A'

The letter 'A' was first introduced to the pupils through writing it both in the uppercase and lowercase on the white board between the red and blue lines as indicated in the pupils' exercise books. The letter name was taught first the pupils were guided to write the letter in the air, on their partners' backs and in the sand tray with their index fingers. Individual pupils were called out to identify the letter from the 26 plastic modelled alphabets. This activity was similar to what The Imaginative Tree (2014) designed for an alphabet matching game with dry beans as shown in Plate 4. 25.

Plate 4.25: A child matching alphabet using beans
Source: Imaginative Tree, 2014

In this section of the intervention, the researcher used beans for a similar activity. The beans were shared among the pupils to be arranged to form both the uppercase and the lowercase of letter 'A' after the sound of letter 'A' had been taught through a song. The pupils were later provided with paper and pencil and asked to write both the upper case and the lowercase 'A' for assessment. At the end of the assessment all the pupils were able to write the letter 'A' correctly as seen from Plate 4.26. The researcher observed that the pupils held the beans and arranged the shape both vertically and horizontally. Most pupils arranged the beans vertically while the rest also arranged theirs horizontally. Plate 4.26 shows an example of pupils who held their beans vertically.

In the subsequent lessons, the previous letters and sounds learned were revised before a new letter was introduced.

Plate 4.26: Arranging beans to form letter 'A' Source: Fieldwork, 2014

Week Seven: The Sand Tray Method for letter 'B'

The letter 'B' was first introduced to pupils by writing both the uppercase and lowercase on the white board using red and blue lines to represent how lines are drawn in the pupils' exercise books. The letter name was taught through a song. The pupils were then guided to write the letter in the air and on their partners' backs with their index fingers. The researcher called out pupils to identify the letter from the 26 plastic modelled alphabets spread out on a table.

Following Gorman's (2012) teaching strategy in which a miniature sand tray (Plate 4.27) was used, the existing sand tray in the school was emptied of school bags and used for teaching and learning of both numerals and the alphabet. The pupils were also taught writing in the sand.

Plate 4.27: A teacher demonstrating a written alphabet in a sand tray Source: Gorman, 2012

This activity in the sand tray was adapted for this study in the teaching and learning of the alphabet 'B' as shown in Plate 4.28 for the lesson on letter 'B' in the existing sand tray. It was observed in this activity that few pupils kept on turning the letter 'B'. These pupils were mostly alerted by their classmates. Those pupils then spread out the sand and corrected their mistakes.

Plate 4.28: Written letter 'B' in the sand tray by a pupil   Source: Fieldwork, 2014

Weeks Eight, Nine, Ten, Twelve & Twenty-Seven: The Coiling Method for letters 'C', 'D', 'E', 'G', 'V' and 'Y'

In almost every preschool and kindergarten classroom today, clay dough can be found and is used for tactile and kinaesthetic activities (Mugurussa, 2012). The Imaginative

Tree (2014) created letter impressions in clay dough by pushing in wooden letters and then decorating them with colourful beads as shown in Plate 4.29 for letter 'C'.

Plate 4.29: Impressed Clay dough decorated with beads.
Source: Imaginative Tree, 2014.

In this study a similar activity was conducted. Processed clay was used to teach and create the letters 'C' and 'G' by applying the coiling method of modelling in ceramics. Plate 4.30 shows a sample of the pupils' activity. It was observed that most of the pupils who were sitting around the round classroom tables turned their coils of the letter 'C'. Those pupils were alerted to realise their mistakes when the researcher went round to monitor the pupils' work.

Plate 4.30: Pupils' clay activity to form letters 'C' and 'G' Source:

Fieldwork, 2014

Week Eleven: The Shell Method for letter 'F'

In this session the pupils were introduced to the letter 'F'; they then practised writing

the letter in the air, on the backs of their colleagues, and later wrote it on a ruled sheet

with pencil. The pupils were then supplied assorted sea shells and were guided to use

them to create the letter 'F'.

It was observed in the letter 'F' activity that it was most of the pupils' first time of

feeling the texture and shape of sea shells. When pupils were asked to arrange the shells,

some were found appreciating the colours on them and teasing their classmates for not

getting such beautiful shells. The researcher realised that it was good to have introduced

the shells to the pupils before the lesson so that they would have a feel of it. The pupils

were later supervised to arrange their shells to form the letter 'F'. Plate

4.31 illustrates the activity.

Plate 4.31: Pupils' arranged shells of letter 'F'
Source: Imaginative Tree, 2014.

2. Using new teaching approach with new instructional materials for letters 'H' -'Z'

In the new approach, pupils were engaged the in activities for the learning of nineteen letters of the alphabet and their related sounds using some selected art techniques. The same procedure used for letters 'A' to 'G' was used in teaching and learning of the eighteen alphabets and their sounds was changed slightly for letter 'T'. In this activity, the pupils were guided to sing and perform the traditional 'Kete' dance in order to use the gestures and hand movement in this performance to learn letter 'T'.

'Kete' is an indigenous performance of the Asante ethnic group of Ghana and a very familiar performance in Kumasi, especially at funerals and other traditional occasions.

Week Thirteen: The 'subtractive' Approach for letter 'H'

The 'subtractive' technique associated with modelling in both sculpture and ceramics was adopted to guide the pupils to use a square biscuit to shape the letter 'H'. First of all, the letter 'H' was introduced to the pupils by writing both the upper and lower cases on the board for them to observe the shape. The letter name and sound were then taught through a song. Afterwards the pupils were guided to write the letter in the air, in the

sand tray and on the backs of their friends. A square biscuit was distributed to the pupils

for them to shape it into the letter 'H' using the subtractive method by breaking it in the

middle section into two, and chipping the broken edges bit by bit so that when the

chipped edges of the two pieces are placed edge to edge it will form the letter 'H'. This

was done while singing the song with the sound of the letter.

The pupils were then given sheets of paper with ruled lines like their exercise books and

told to write both the upper and lower case letter 'H'. After marking all the works, it

was observed that all the pupils were able to write letter 'H' correctly.

Plates 4.32, 4.33 and 4.35 are pictures taken during the activity.
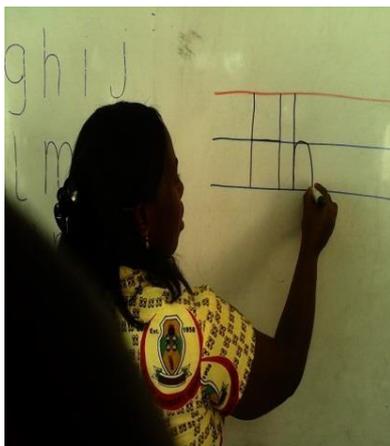
Plate 4.32: Written 'H' by teacher   **Plate 4.33**: A Pupil's Big 'H' Source:
Fieldwork, 2014   Source: Fieldwork, 2014

Plate 4.34: A Pupil's Small 'h'
 Source: Fieldwork, 2014

In this activity, it was observed that some of the pupils had challenges breaking up their biscuits. It was observed that pupils who were rushing in this activity got their biscuits breaking up in pieces. Those who took their time in breaking it bit by bit were able to get the letter 'H'. The pupils were therefore advised to be patient in performing this activity. Those whose biscuits got broken were provided with new biscuits to perform the activity correctly. Yet still some got theirs broken again. After the lesson, the pupils were observed during their snack time using their biscuits to create both upper and lower case letter 'H'. This motivated other classmates who were not part of the intervention class to copy what their friends were doing.

Week fourteen: The Straw Approach for letter 'I'

The pupils used an arrangement of plastic drinking straw cut into small sizes to form the letter 'I'. This was done by cutting straws into manageable sizes using scissors in order to have plenty of the straw for the activity. The pupils were provided with paper and crayons to colour the paper. The letter 'I' (both upper and lower case) was written on the coloured sheets. Pupils were directed to glue the written 'I' bit by bit and arrange the cut straws on the glued surface bit by bit until the letter was complete. Although this activity was to last for one hour, the nature of this activity made it last for an hour and a half. Plate 4.35 shows a sample of the pupils' works.

It was observed that the pupils had challenges in arranging the straws on the glued surface. It was realised that the pupils arranged the cut straws upright but at a point in the arrangement, some of the straws fell off. Other pupils also got some of the straw sticking to their fingers. The researcher then realised that the cut straws were too small that was why the pupils had those challenges. She took note of that and decided that if

85

this activity should be done again the straws should be cut a bit longer than what was used for this activity.
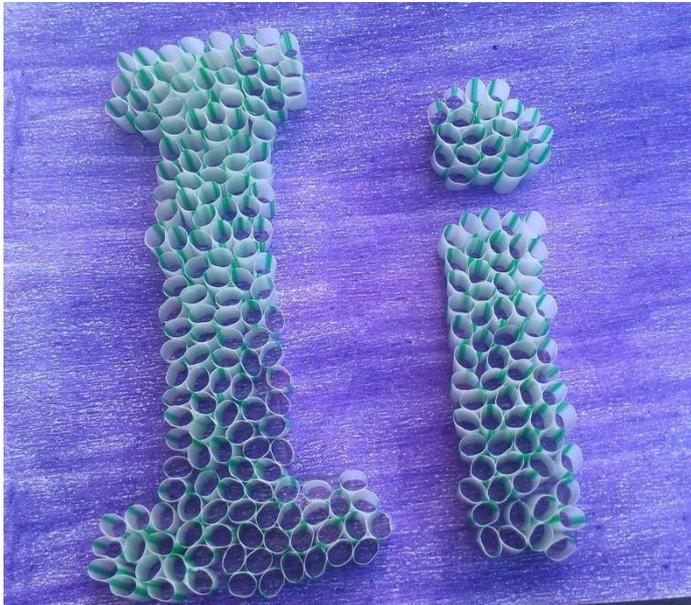
Plate 4.35: Straws for letter 'I'i
Source: Fieldwork, 2014

Weeks Fifteen, Twenty-One and Thirty-One: Imaginative Drawing Approach for letters 'J,' 'P' and 'Z'

Drawing is an activity. The 'Imaginative drawing' technique in Picture making and basic drawing were adopted for this activity where the pupils were asked to draw themselves holding the letters 'P', 'J' or 'Z'. Plates 4.36, 4.37 and 4.38 show examples of the pupils' works. This is in line with the idea that the art therapist uses drawing as an assessment tool in understanding the challenges faced by children such as emotional challenges and what they think about themselves (Malchiodi, 1998; 2010).

Plate 4.36 A KG1 boy's letter 'P'
Source: Fieldwork, 2014.

Plate 4.37: A KG l girl's letter 'Z'

Plate 4.38: KG 2 girl's drawing with letter 'J'
Source: Fieldwork, 2014

The human figures drawn by the pupils affirm what Roland (2006) states about drawings that children in the age range of 3 to 6 years produce from what they conceptualize to represent human figures. The sampled Kindergarten One pupils fall into this age range of three to four years who use circles and lines to create human forms

while the Kindergarten Two pupils aged five to six years draw human figures with different heads with the trunk, arms and legs positioned in the right locations.

When the pupils were asked to draw themselves some voiced out they cannot do it but when they saw others drawing they quickly drew something. It was later observed that those pupils always declined to draw whenever they had to draw something in class. They need help to realize that drawing provides a means for people to express their ideas and that writing is another way of drawing.

Weeks Sixteen and Twenty-Eight: The Direct Printing Approach for letters 'K' and 'W'

The 'Direct printing' technique in Picture making was adapted to print the letters 'W' and 'K'. This activity involved cut midrib stalks of plantain leaves which were used to print the letter 'W' on a plain sheet using poster colour. The base of flower like shaped pencil hardeners were also coloured with the pupils' graphite pencil and used to print Letter 'K' on a white background. The pupils were later asked to choose their preferred colours to shade the insides of the printed 'K'. Plate 4.39 and Plate 4.40 show samples of the pupils' works.

Plate 4.39: Plantain leaf stalk direct printing for letter 'W'
Source: Fieldwork, 2014

Plate 4.40: Sharpener direct printing for letter 'K' Source:
Fieldwork, 2014

It was observed with respect to the printing of the letter 'W' with the plantain stalks that some pupils fetched more colour and this made their work very dirty. In line with the sharpener method, some pupils thought they had not arranged their motifs well so they decided to erase the prints the same way they erase writing in pencil. This made some of the works very dirty. Pupils whose works were dirty did not want to show their works.

The researcher took the opportunity to talk to such pupils and motivated them to take their time next time.

Week Seventeen: The Plain Weave Approach for letter 'L'

The 'Plain weave' technique in textiles, leather work and basketry were adopted to guide the pupils to use white and coloured papers to weave the letter 'L'. A plain sheet was chosen and ruled lines in the form of the letter 'L' (both upper and lower cases) were drawn with a ruler and pencil. The pupils were guided to cut through the lines with a knife. Colourful strips of papers supplied by the researcher were used to weave in and out through the openings. Plate 4.41 shows a sample of the pupils' work.
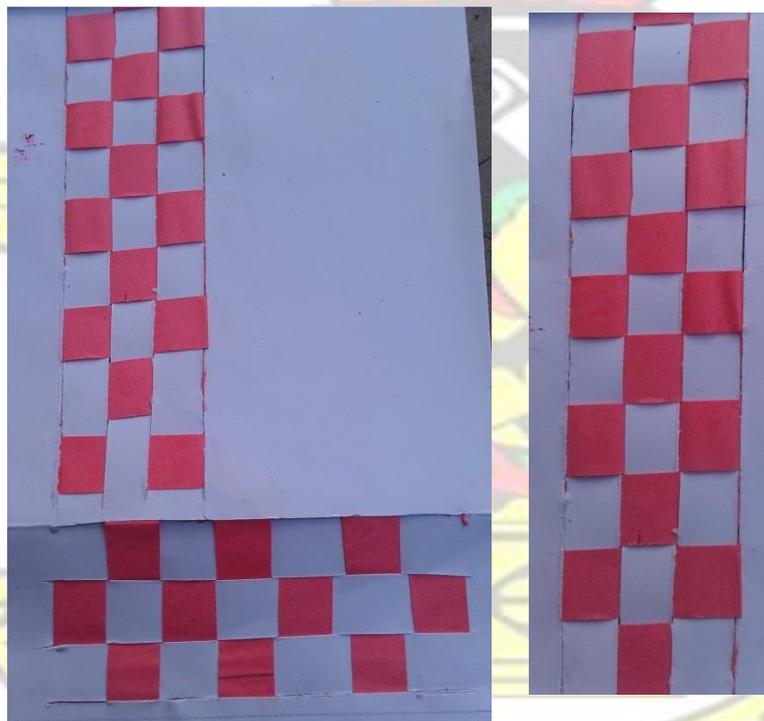
Plate 4.41: Plain weave for letter 'L' and 'l'
Source: Fieldwork, 2014

The challenge some pupils had with respect to this activity was that by the time pupils finished weaving the upper case letter 'L' their working sheets were torn into two. These two sheets were glued together. Pupils weaved the lower case letter 'l' with ease.

Weeks Eighteen and Nineteen: The Collage Approach for letters 'M' and 'N'

'Collage', a technique in picture making, was adopted to engage the pupils to use cutout papers, sea shells, crayons, glue, pebbles and seeds to create the letters 'M' and 'N'. Warren (2012) has outlined various collage activities for pre-school which include paint collage, colour collages, glue collage, water mosaic collage, waxed paper collage and self-stick paper collage based on the themes- nature collage, beach collage, shape collage, texture collage, yarn collage, shiny collage and multi-media collage.

A glue textured collage as mentioned by Warren (2012) was used to create collage with the mentioned materials. A white background card was given to the pupils to colour them with crayons in the colours of their choice. The letters 'M' and 'N' were written for pupils to glue. Pupils were guided to arrange the cut-out papers, broken sea shells, crayons, pebbles and seeds on the glued letters. The collage was left to dry. Plates 4.42 and 4.43 show a sample of pupils' work.

Plate4.42 & 4.43: Collage for letters 'M' and 'N'

Source: Fieldwork, 2014

With the encounter of the pupils playing with the seashells they were given in an earlier activity (see Plate4.42 & 4.43) in mind, the researcher decided to include the pupils in the gathering of materials to enable them have a feel of the shells, pebbles and seeds that would be used for the collage activity. This time it was also easy for the pupils to work on the glued surface. The challenge the pupils faced with this activity was that

although they were asked to be extra careful with the broken shells, few of the pupils got hurt by them. These pupils were attended to immediately by giving them first aid.

Weeks Twenty and Twenty-Nine: The Mould Approach for letters 'O' and 'X'

The term 'mould' as a forming technique in sculpture and ceramics was adopted to guide the pupils to mould Styrofoam to create the letters 'O', 'X' and 'Y'. This was achieved by scooping with their index fingers. The pupils later put in a ring or coiled modelled clay in the created mould 'O'. Plates 4.44 and 4.45 show sample of pupils' work the letters 'O' with coiled clay dough and 'X'. The challenge the pupils had with this technique was that some pupils in removing the unwanted part to create the letters unknowingly overworked leading to the creation of holes in the letter.

Plate 4.44: A pupil's letter 'O'   **Plate 4.45**: Styrofoam for letter 'X'

Source: Fieldwork, 2014   Source: Fieldwork, 2014

Weeks Twenty-Two, Twenty-Three and Twenty-Six: Colouring and Erasing Approach for letters 'Q', 'R' and 'U'

The pupils used colouring and erasing to create the letters Q, R, and U. Plain sheets were provided together with crayons. The pupils used crayons of their choice to colour the sheets. After drawing the letter in pencil, the tip of the eraser was used to erase parts

of the image until they arrive at the letters Q, R, and U. Plates 4.46, 4.47 and 4.48 show samples of the pupils' works.

Plate 4.46 Colouring and erasing for letter 'R' **Plate 4.47**Colouring and erasing for letter 'U'

Source: Fieldwork, 2014   Source: Fieldwork, 2014

Plate 4.48: Colouring and erasing for letter 'Q'
Source: Fieldwork, 2014

The challenges brought forth for this technique was that some of the pupils erased their works to the extent of creating holes in their work. Some also thought they had not got the shape of the letters well so they kept on erasing and at the end of the lesson, their works were dirty.

Week Twenty-Four: The Appliqué Approach for letter 'S'

Fabric is generally used for clothes for both male and female. In fashion, which is an aspect of art, fabric is used for both clothes and footwear. Fabric also forms part of interior decoration (Howard & Opoku-Asare, 2012). Hampton (2014) used fabric scraps to decoupage cardboard alphabets of the letters 'Y, O, U, C, A, N' as part of her interior decoration. The appliqué technique in textiles and leatherwork was adopted to guide the pupils to attach a cut-out letter 'S' from a designed cloth and fix it onto a plain cloth with the aid of cooked cassava starch. Plate 4.49 shows a sample of the pupils' work.

Plate 4.49: Appliqué' for letter 'S'
Source: Fieldwork, 2014

The challenges encountered with this technique was that although the pupils were provided with child-friendly pairs of scissors with some caution, a boy hurt a friend with his. Some pupils also did not cut along the lines drawn on the textured fabrics when they were asked to and therefore ended up spoiling their fabrics. Some of the pupils also turned the textured fabric when fixing to the plain fabric.

Week Twenty-Five: Music and Dance Approach for letter 'T'

Culture is generally described as the way of life of a group of people of a particular place. The classroom is a place where cultures merge (Elliot et al, 2000). The pupils selected for the study come from different cultures as they belong to the Asante, Fante, Ewe, Ga, Grunshi, Mamprusi, and Sisala ethnic groups of Ghana. Music and dance is an aspect of each of these cultures. The KNUST Nursery school therefore presents a culturally rich environment for music and dance activities. For the purpose of this study, the 'Music and dance' technique in performing art was adopted as a teaching and learning tool. In this activity, the pupils were guided to sing and perform the traditional 'Kete' dance in order to use the gestures and hand movement in this performance to learn letter 'T'.

'Kete' is an indigenous performance of the Asante ethnic group of Ghana and a very familiar performance in Kumasi, especially at funerals and other traditional occasions. Plate 4.50 shows some of the pupils using 'Kete' hand movement technique to depict letter 'T'.

The challenge encountered was that efforts to get the pupils to straighten their right elbows to get the letter 'T' straight were not successful as the pupils still slanted that elbow when they were dancing.

Plate 4.50: Music and dance performance for letter 'T' Source: Fieldwork, 2014

Weeks Thirty-Two, Thirty-three and Thirty four: The 'Star Game' technique

After all the 26 letters of the English alphabet and their sounds activities had been done with the pupils, the researcher designed a play activity that adopted the hopscotch principle for the pupils to play with friends during the break periods and free time on the grounds of the school compound. The 'Star game' technique was introduced to serve as a source of revision for the pupils so they would remember the letters and sounds of the alphabet as well as a resource that other teachers could use for assessing their pupils' performance in class. The reason behind this play activity was that on the school timetable shows that the pupils have a period for arrival and play-time that lasts one hour every morning when parents brought them to school and before school starts. This learning game which was designed for the sampled population could be adopted by the teachers on duty and other pupils in the school as a teaching and learning resource that the pupils can participate in fully every morning while waiting for school assembly.

Another reason was that children learn more and effectively by doing and this could be achieved through the use of games (CRDD, 2006). In kindergartens various games are played in the classroom by teachers and their pupils to get the children interested in learning which are mostly based on the alphabets and numerals using songs and rhymes. The Curriculum Standards Branch of the Alberta Education Department (2008) therefore views purposeful play as an important means of learning for pupils in kindergarten. This is because pupils involved in playful activities become highly motivated and capable of intense concentration.

4. Nature of the 'Star Game'

The 'Star game' was named after the short form of Starlinda, which is one of the researcher's first names. The game has eleven main columns, nine of which are filled with at most, three letters of the alphabet. Also, there are two columns for START and FINISH to guide the pupils to know where to start and finish the game. The players should be in at least two groups. A player should be able to mention both the letter names and sounds in the column they step in before they can move to the next column. The observers repeat the alphabet the player. If a player gets the first column correct, the person is awarded a point (the awarded points may depend on the one initiating the game) and they carry on to the next column but if they are not able to do this then the chance to play goes to the other group. The group which finishes first is adjudged the winner.

The game was played first between pupils of KG 1 and KG 2 in the classroom. The KG1 pupils won the game two times over the KG2 pupils. The game was later transferred to the school compound. This attracted the attention of other pupils and teachers. This time the KG2 pupils were adjudged the winner. Plates 4.51, 4.52 and 4.53 show the nature of the game and some pupils playing it.
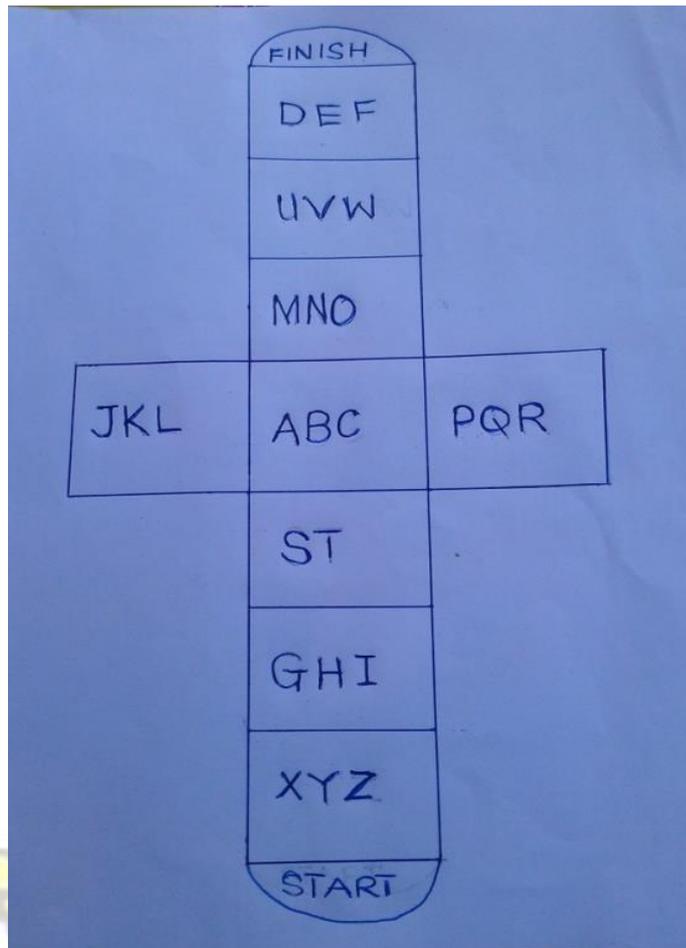
Plate 4.51: The 'Star' game
Source: Fieldwork, 2014

Plate 4.52: A KG1 girl playing the 'Star' game
Source: Fieldwork, 2014

Plate 4.53: A KG2 boy playing the 'Star' game
Source: Fieldwork, 2014

**Weeks Thirty-Five and Thirty-Six: Post-intervention assessment of pupils'
performance**

Although the pupils were assessed during the activities designed for the learning of the
identification, reading, writing and matching the letters and sounds of the alphabet, they
were also assessed at the end of the intervention activities in both the letters and sounds
of the alphabet verbally and in written form. Plates 4.54 and 4.55 show some of the
works produced by the pupils.
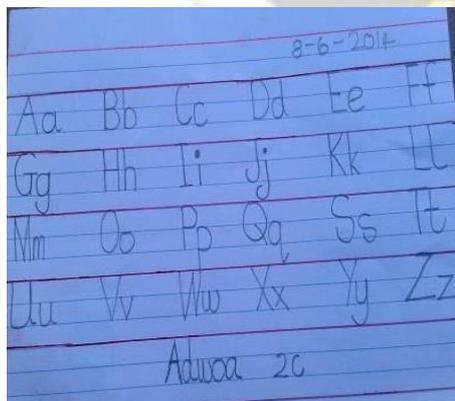
Plate 4.54: Correct written letters (girl)   **Plate 4.55**: Reversed written letters (boy)
Source: Fieldwork, 2014   Source: Fieldwork, 2014
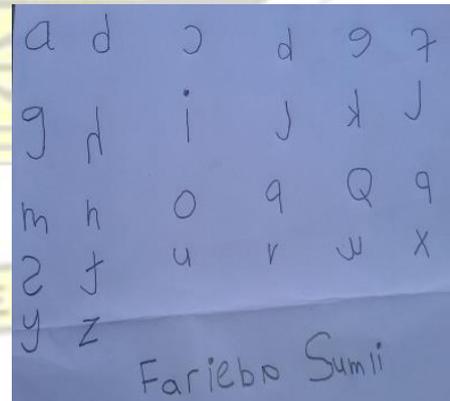
5. Findings from the Assessment

Analysis of the outcome of the intervention exercise results for the 120 pupils in the post-test revealed that:

1. 84 out of the 120 pupils (representing 70%) could write and identify the letters and sounds of the alphabet.

2. 12 out of 120 pupils (representing 10%) could identify and read the alphabet but they kept on turning some of the lower case letters when writing them so that the letter 'p' became 'q' and 'b' became 'd'. This group of children were attended to individually to help them to overcome this difficulty but the problem surfaced after the weekend stay at home so when they are asked to write so the following week's work showed the turning of these letters again.

   Further conversation with this group revealed that they were Muslims who attend Arabic classes during the weekend where what they learn is different from what the normal school curriculum teaches, they do not have time to practise to overcome this learning challenge. This challenge creates a chance for further research.

3. 24 out of the 120 pupils (representing 20%) could identify, read and write the alphabet but could not associate the alphabets with their related sounds. These results are presented in graphic format in Fig 4.2 for the post-test using a pie chart.
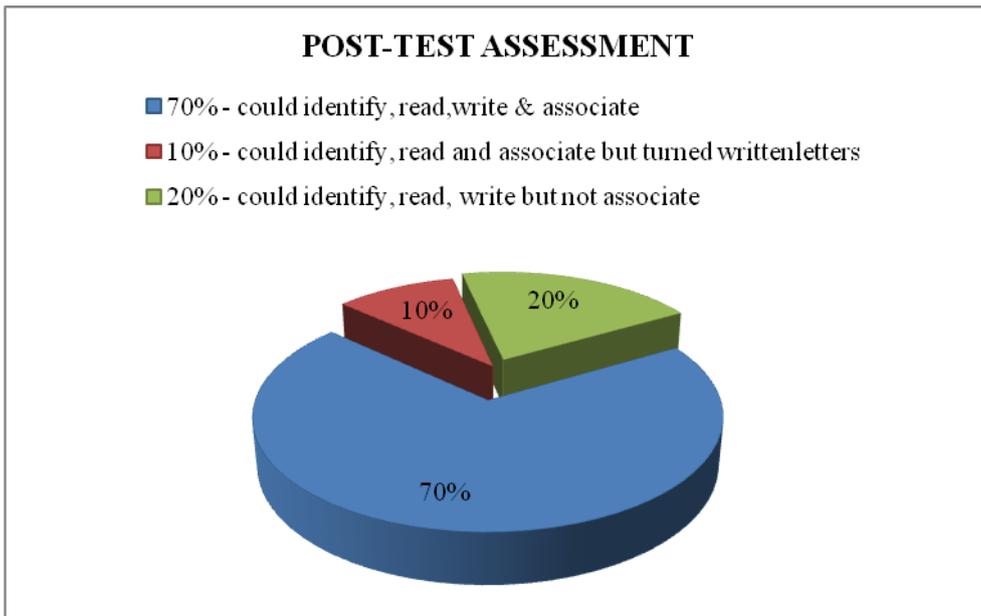
Figure 4.2: Assessment of Letters and Sounds of the Alphabet Source: Fieldwork, 2014

Figure 4.3 shows the analysis of both pre-test and post-test.
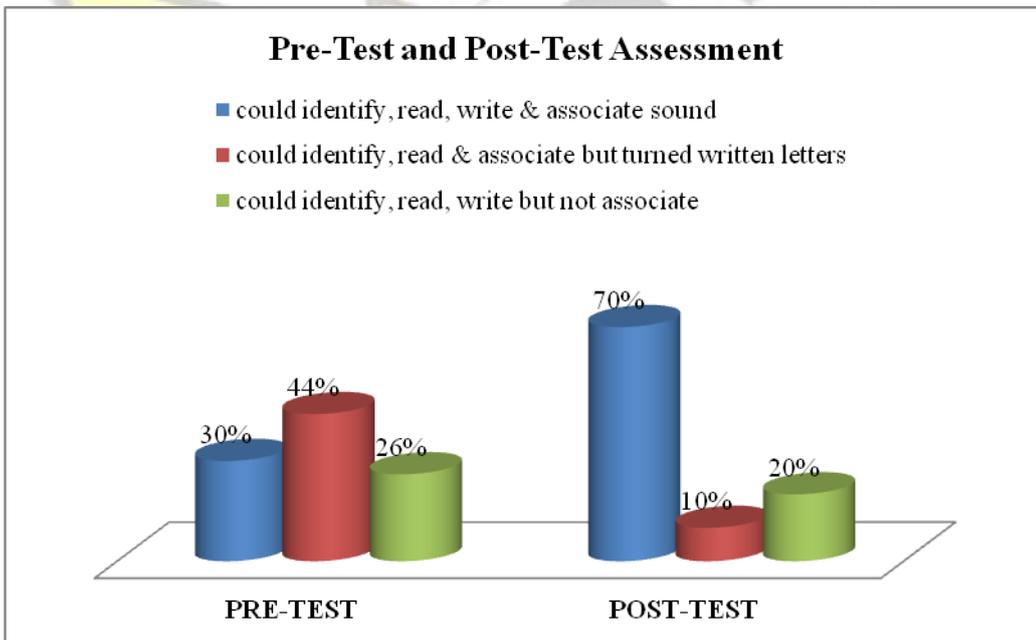
Figure 4.3 Assessment of Letters and Sounds of the Alphabet

In Fig 4.3, the researcher assessed the pupils' ability to identify, read, write and associate the letters and sounds of the alphabet. In the pre-test assessment, 30% of the pupils could identify, read write and associate letters and sounds of the alphabet but

70% could identify, read, write and associate letters and sounds of the alphabet in the post test assessment. Again, the number of pupils who could initially identify read and associate names and sounds but turned the written letters reduced from 44% to 10% after the post-test assessment. Besides, 26% of pupils who could identify, read and write but could not associate the letters and sounds of the alphabet reduced to 20% after the post-test. These results give an indication that the arts can play a crucial role in the teaching and learning of the letters and sounds of the alphabet as well as make other kindergarten teaching and learning activities enjoyable. This affirms AduAgyem et al (2009) submission that the arts offer essential opportunities for creative expression, problem solving and social development.

4.6 Designing an Art Piece for the School Anniversary

As part of the school's 50th Anniversary celebration of the study school which took place while the research was in progress during the 2013/2014 academic year, the researcher engaged the pupils of the various classrooms together with their class teachers to produce different art works for an exhibition. The researcher and the sampled population of pupils also designed and produced an art piece in which four different colours of clay dough were arranged to write a 'WELCOME' message on chipboard to welcome visitors to the school. This art piece was fixed at the entrance of the exhibition room. Plate 4.56 shows this clay work.
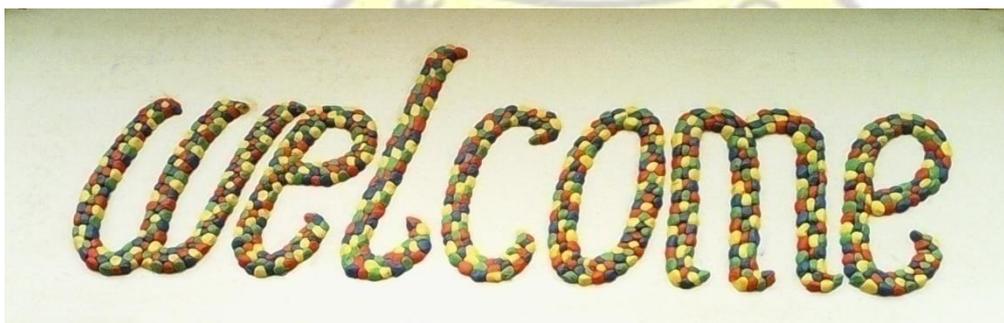
Plate 4.56: Arranged clay dough

4.7 Main Findings

The main findings of the study are listed as follows:

Objective 1: With respect to the availability of teaching and learning materials for pre-reading and pre-writing in KNUST Nursery School, the study found out that teachers base their work on the syllabus supplied by the GES together with teachers' guide and pupils' activity books. Other materials that are mostly used by teachers in lesson delivery include charts, pictures, the letters of the alphabet and numeral hangings, flash cards, real objects and both white and black board illustrations.

The study showed that the use of teaching and learning materials in lessons motivated the pupils to actively participate in the teaching and learning process. Again, learning did not end after the classroom activities but some pupils were seen using the available materials to practise what has been learned outside official instructional hours.

Objective 2: For the teaching of pre-reading and pre-writing approaches, the teachers employed the child-centred and play strategies with music as well as the pattern approach for the lesson activities. The pattern approach was specifically used for the teaching and learning of the letters and sounds of the alphabet.

Four categories of pupils were identified from the pre-test exercise with the study sample of 200 pupils. They exhibited the following characteristics:

> i. 60 (representing 30%) could write and identify the letters and sounds of the alphabet correctly ii. 40 (representing 20%) turned some of the lower case letters, example p and q, b and d iii. 20 (representing 10%) could not handle chalk or pencil and

could not turn their wrists to write at all iv. 80 (representing 40%) could not associate the alphabets and their related sounds.

Objective 3: The intervention activity that adopted kinesthetic activities as Art therapy tools had positive effects on pupils as follows:

I.   The pupils became active in the classroom and were able to interact with the instructional materials on their own to come out with the letters of the alphabet. The activities served as a form of motivation.

II.   The pupils tried hard and practised what was taught and also learned whenever they saw the researcher-singing a song about the alphabet and sounds, mimic the playing of the 'star' game, and especially breaking of biscuit to shape the letter 'H' during the snack period.

III. The interventions were appreciated by both teachers and parents. The approach used for the intervention aided pupils' understanding and reduced the challenges faced by pupils at the end of the study as compared to the existing strategy used in the school.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1   Overview

The study focused on investigating the existing teaching approaches and strategies, and instructional materials used for the teaching and learning of pre-reading and prewriting of the English alphabet and their related sounds at the KNUST Nursery School. The research also looked at the impact of these instructional materials and strategies on the kindergarten pupils' performance. The research further examined the challenges that

Kindergarten One and Two (KG1 and KG2) pupils had during the teaching and learning of pre-reading and pre-writing the English alphabet and their related sounds.

The study took the form of identifying the existing strategies, activities as well as the instructional materials that could be used in the teaching and learning of pre-reading and pre-writing especially in relation to the letters of the English alphabet and their related sounds. Based on the pre-reading and pre-writing challenges that were identified during the observation of teaching in the two classes, the school art therapy intervention approach that takes into consideration the three learning groups - visual, auditory and tactile- was adopted to engage the pupils in kinaesthetic activities for improved teaching and learning of the letters of the English alphabet and their related sounds. This also involved the introduction of a kind of hop-scotch game named
'Star', to serve as motivation for the KG1 and KG2 pupils to revise the names of the letters and sounds of the alphabet.

5.2   Summary of Findings

In line with Objective One of the study which sought to identify the teaching and learning materials available for teaching pre-reading and pre-writing skills in the KNUST Nursery School, the study brought to the fore that the school is endowed with teaching and learning materials; they are mostly two dimensional in nature. The available materials are usually hung in the classroom to aid and boost pupils' understanding in pre-reading and pre-writing lessons. These materials include charts, flash cards, alphabet hangings, crayons, board illustrations and real objects. The reference materials include the syllabus supplied by the GES, pupils' activity books and teachers handbook supplied by the Mastermind Publications Limited.

Other existing instructional materials for teaching pre-reading and pre-writing skills that are recommended by the Curriculum for Kindergartens in Ghana and are also used by the KNUST Nursery School teachers for teaching pre-reading and pre-writing include paper, chalk, charcoal, chalkboard, sand, pencils, leaves, and punched papers.

It was observed that when teachers employ teaching and learning materials in lessons the pupils become active and each pupil is eager to perform an activity during lessons. The study also observed pupils learning and revising what they had been taught with their classmates after school in their various classrooms while using the charts, alphabet and numeral hangings. This created space for the slow learners because some pupils learn best from their colleagues. Although the pupils used the chorus form of learning, the assumed leader of the team tried to correct those who went wrong and this motivated other pupils to join.

With respect to Objective Two of the study which was to observe and describe the teaching approaches KG1 and KG2 teachers in KNUST Nursery School employ in the teaching of pre-reading and pre-writing skills and assess how effective these approaches are, the study showed no specific strategy for teaching the letters and sounds of the letters of the alphabet. However, the Handbook and the Curriculum point out five general strategies for teaching at the kindergarten as teacher-centred method, child-centred method, dialogue, play, and drama. The child-centred and play approaches were the ones employed by teachers in the school.

The Handbook for Pre-School Education presents a situation where pupils should identify the letters of the alphabets and identify letters that relate to their names and other simple words in pre-reading while the Curriculum recommends some finger and wrist exercises through scribbling, strokes and curves, colouring, tracing and lacing of

letters. These strategies were found to help in pre-writing in relation to the letters of the alphabet and their related sounds.

In the observation that took place in all the four classes at Kindergarten One in relation to the learning of reading and writing of the alphabet and their sounds, it was realised that the teachers used the patterns in the form of scribbling, strokes and curves, and the joining of curves and strokes to form letters, as well as learning of letter names and sounds through the singing of songs. An example is the joining of small letter 'c' to small letter 'l' to form letter 'd', joining small letter 'l' to two reversed letter 'c' stacked one on top of the other to form capital letter 'B' and small letters 'c' and 'l' to form small letter 'a'; scribbling and then tracing the strokes and curves of the letters of the alphabet in the air, then writing on their slates and in their exercise books. Other activities that were noticed during pre-reading and pre-writing activities were colouring, tracing, matching and filling in blank spaces on the chalkboard using flash cards.

The study revealed that the method used by teachers to teach the letters and sounds of the alphabet in pre-reading and pre-writing had some challenges. The researcher therefore set aside time to visit each of the four classes in KG1 to observe how the pupils worked. The observation showed four categories of pupils:

1. 60 of the 200 pupils (representing 30%) could write and identify the letters and sounds of the alphabet.

2. 40 pupils (representing 20%) turned some of the lower case letters; for example, 'p' and 'q', 'b' and 'd'.

3. 20 (representing 10%) could not handle either a piece of chalk or a pencil, and could not turn their wrists and write at all.

4. 80 (representing 40%) could not associate the alphabets and their related sounds.

Following the pre-test after the intervention activities, it was observed of the sample KG1 and KG2 pupils that:

1. 36 of the 120 pupils (making 30%) could identify, read, and write the letters and associate the letters with the sounds of the alphabet.

2. 53 pupils (representing 44%) could identify, read, and associate but turned the written letters.

3. 31 pupils (representing 26%) could identify, read, and write the letters but could not associate them with their individual sounds.

For Objective 3 which sought to introduce kinesthetic activities that can be used as Art therapy tools to improve pupils' performance in pre-reading and pre-writing among Kindergarten pupils, the study showed that the 120 pupils who served as sample for the study benefitted from the intervention as their performance improved when the new strategies were introduced.

Using a mixture of Kindergarten One and Two pupils served as a great source of motivation for all the pupils. The pupils sometimes took the lead and interacted more with the instructional materials after a letter had been introduced on the white board. There was some form of competition among pupils in the creation of letters with materials and this also motivated the learners to be more active work on their own. Feedback from parents and teachers gave an indication of the success of the intervention as some pupils were seen using square biscuits to create letters on their own during snack time and also asking for assistance every morning to play 'Star

Game'.

At the end of the intervention,

1. 84 of the 120 KG1 and KG2 pupils (representing 70%) could write and identify the letters and associate them with the sounds of the alphabet.

2. 12 pupils (representing 10%) could identify, read but kept on turning some of the lower case letters when writing.

3. 24 pupils (representing 20%) could identify, read and write but could not associate the alphabets and their related sounds.

5.3   Conclusions

The use of instructional materials in pre-reading and pre-writing lessons at the Kindergarten should not be overlooked. This is because these materials boost pupils understanding. Moreover, the use of instructional material in teaching pre-reading and pre-writing activities more by pupils to affirm the Chinese adage, '''when I hear I forget, When l see remember, when l touch I understand.'''

When planning lessons, teachers should consider the three groups of learners-visual, tactile and auditory so as to come out with activities that leverage on the understanding and performance of the different categories of learners.

Although the study used a fraction of the pupils in the KNUST Nursery School, it can be concluded that integration of the arts using kinaesthetic approach in pre-reading and pre-writing at the kindergarten such as was used in this study can generally improve pupils' performance. Also arts inclusion in language literacy creates fun and increase pupils activeness. Extending the time for pre-reading and pre-writing in line with the

letters and sounds of the alphabet and factoring the concept of multiple intelligence will motivate pupils to actively be involved in lessons.

On how kinaesthetic activities could be used as a tool in art therapy to improve pupils performance in pre-reading and pre-writing, it can be concluded that the intervention brought the pupils to the forefront and created the 'can do' spirit in pupils. This built pupils self-esteem and increased creative ability in them. Pupils' social interaction with mates increased. This was evidenced by the fact that team work was exhibited in every activity. Thus becoming an encouragement for pupils to collaborate and learn with other mate. A desirable outcome after the intervention was the improvement in the academic performance of pupils used for the study. The 'Star Game' serves as the latest addition to the playing activities that can help improve academic and educational performance.

Conflict between the Arabic style of writing followed in Islamic schools (popularly called 'Makaranta') during weekends pose challenges to pupils who attend 'Makaranta' as they find it difficult to differentiate writing of the letters of the English alphabet during the regular school. This situation presents opportunity for further research on how the reading of English letters of the alphabet may be influenced by the Islamic letters of the alphabet in the regular school system.

5.4   Recommendations

The study makes the following recommendations to help address challenges faced by pupils in pre-reading and pre-writing at the kindergarten.

1. Management of schools should routinely organise training programmes for teachers and those involved in the formation of the pupils to build their capacity and sharpen their skills. These programmes will also help to upgrade their skills

110

in new strategies and approaches that could be used in teaching the letters and sounds at the kindergarten. Mentoring and coaching can be considered by management to give on-the-job training to teachers.

2. Due to the importance of pre-reading and pre-writing skills development at the kindergarten and the critical role these skills play in school education, teachers and educational developers should adopt newer approaches and strategies in the teaching and learning of the letters of alphabet and related sounds. The new approaches and strategies revealed by the study could be considered.

3. Teachers should consider the different learning abilities of pupils when using the new approaches and strategies outlined in the Handbook and the CRDD curriculum and design relevant activities for the teaching and learning of the letters of the alphabet and their related sounds. The new approaches and strategies identified by this study can be a starting point. This may include the 'Star Game' developed by the researcher.

4. Management of schools, teachers and support staff engaged in kindergarten education should consider the introduction of varied teaching and learning materials that pupils can associate and identify with. This can help to reduce the incidence of situations where pupils have difficulty associating letters of the alphabet and their related sounds. In this regard, computer-aided programmes and other audio-visual programmes can be introduced.

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APPENDIX A

INTERVIEW GUIDE FOR TEACHERS

Background of teachers

1.   Background of the School

2.   The academic background of teachers

3.   Number of teaching staff

4.   Number of supporting staff

Background of pupils

1.   Average age of pupils

2.   How pupils are enrolled in the school

3.   Number of pupils on roll

4.   Average class size

Objective one

1.   Reference materials used by the school

2.   Suppliers of the reference materials

3.   Subjects areas teachers teach

4.   Teaching and learning materials used in these subject areas

5.   The appropriateness and effectiveness of the teaching and learning materials 6.
        Involvement of pupils in the usage of the teaching and learning materials in
        lesson delivery

7.   The impact of teaching and learning materials on pupils

Objective two

1.   Duration for teaching pre-reading and pre-writing

2.   Teaching strategies for teaching pre-reading and pre-writing

3.   Teaching and learning materials for teaching pre-reading and pre-writing
4.   Teachers' procedure to teach the letters and sounds of the alphabet

117

5. Pupils' involvement or engagement in the teaching of the letters and sounds of the alphabet.

6. Other activities that pupils are engaged during pre-reading and pre-reading activities

7. Challenges faced by teachers in the usage of existing teaching strategies

8. Teachers' observation on the challenges faced by pupils in the existing strategies

9. Ways to manage the challenges by both teachers and pupils

10. Pupils' assessment in the class

Objective three

1. Teachers' knowledge on the use of the senses in teaching

2. Teachers' knowledge on multiple intelligences.

3. Teachers knowledge of art integration in pre-reading and pre-writing lessons
APPENDIX B

QUESTIONNAIRE FOR TEACHERS

This questionnaire was used to seek opinions from teachers at the KNUST Nursery School to enhance the quality of teaching and learning of pre-reading and pre-writing lessons.

I will be grateful if you could provide the necessary information as required in the questionnaire. All information provided will be treated in confidence.

Please tick the most appropriate response where necessary

About the teacher

1. Age category

a)   21-30 years   {   }

b)   31-40 years   {   }

c)   41-50 years   {   }

d)   51-60 years   {   }

2.   How long have you been teaching?

a)   1-5 years {   }   b) 6-10 years {   }

c) 11-15 years {   }   d) 16-20 years {   }

e) 21-25 years {   }   e) 26-30 years {   }

3.   What qualification do you hold?

a)   O' Level/SSSCE {   }

b)   Cert A/ Diploma Level {   }

c)   Polytechnic {   }

d)   University {   }

About the pupils

4.a) What class do you teach? …………………………………………………..
b) Total class enrolment ………………………………………………………….

5.   What   is   the   average   age   of   the   class?

…………………………………………………………………………………….

Facilities for teaching pre-reading and pre-writing

6.   Is there any reference material to aid teaching of pre-reading and pre-writing?

Yes {   }   No {   }

7.   If yes what are they?

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

8.   Is there a recommended text book for pre-reading and pre-writing?

Yes {   }   No {   } 9.

State the source of supply.

a)   Government {   }

b)   Parents {   }

c)   N.G.O. {   }

d)   P.T.A. {   }

10.   State the teaching materials that aid you in pre-reading and pre-writing lessons.

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…………………………………………………………………………………………..

11.   How do pupils interact with these teaching and learning materials?

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…………………………………………………………………………………………

12.   What impact that the materials have on pupils?

…………………………………………………………………………………………

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Pedagogy

13. How many periods per week are allocated for the teaching of the letters and sounds

of the alphabet?

State……………………………………………………………………………………

14. Are the periods sufficient to complete the kindergarten curriculum?

Yes {   }   No {   }

15. If 'No' what do you suggest?

…………………………………………………………………………………………

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16. Which approach do you use in teaching the letters and sounds?

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……………………………………………………………………………………………

17. What specific teaching and learning materials do use in the teaching of the letters

    and sounds of the alphabet?

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18. Do you face challenges using these approaches?
{Yes }   { No }

19. If yes to question 18, what are some of them?

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20. Can all the pupils in your class recognise the letters and their related sounds?   {

    Yes }   { No }

21. If NO to question 20, what letters do they find difficult to recognise?

……………………………………………………………………………………………

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22. What do you do to help pupils who cannot identify the letters and sounds of the

    alphabet?

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23. What play activities do you engage pupils in learning the letters and their related

sounds?

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24. Do you employ the human senses in teaching the alphabet and sounds?

Yes {   }   No {   }

25. Explain   how   you   do   it?
………………………………………………………………………………………
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Comment and suggestion

26. a) What can be done to help pupils who have difficulties in learning the alphabet?

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b) What do you suggest teachers and the school do to improve pupils' performance in
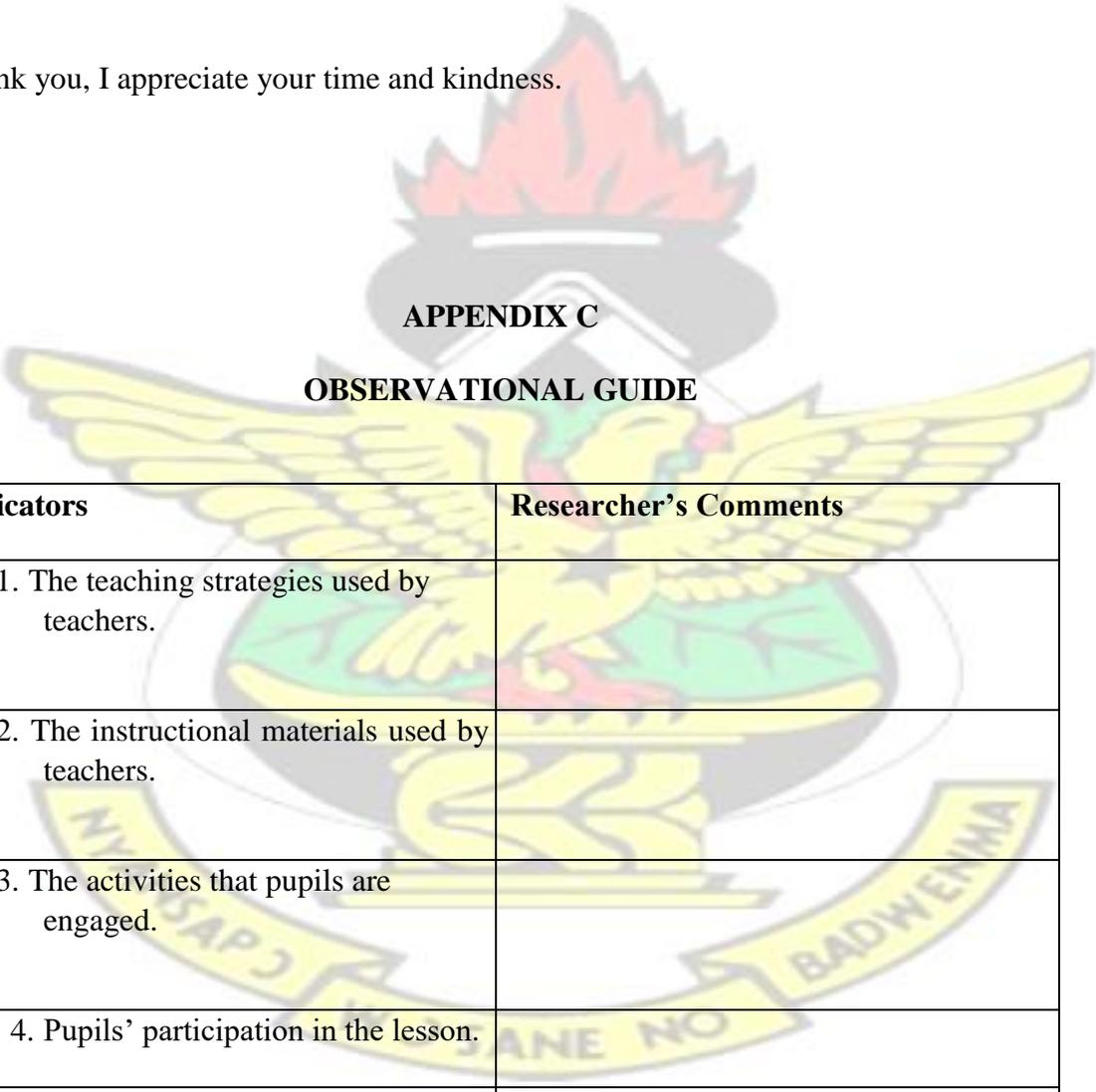
the area of the letters of the alphabet?

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Thank you, I appreciate your time and kindness.

APPENDIX C

OBSERVATIONAL GUIDE

Indicators	Researcher's Comments
1. The teaching strategies used by teachers.	
2. The instructional materials used by teachers.	
3. The activities that pupils are engaged.	
4. Pupils' participation in the lesson.	
5. Pupils' performance in relation to the strategies used.	

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