INFLUENCE OF LEARNING ENVIRONMENT ON READING COMPREHENSION AMONG PRE-UNIT CHILDREN IN KIKUYU DIVISION KIAMBU COUNTY

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DECLARATION

This project is my original work and has not been submitted for an award of degree in any other institution.

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ACKNOWLEDGEMENT

DEDICATION

This project is dedicated to, my daughter, Eunice, son Kariuki, and all my family members.

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Abbreviations and Acronyms

ACRWC	:	African Charter on the Rights and Welfare of Children
CRC	:	Convention on the Rights of the Child
ECDE	:	Early, Childhood Development Education Centres
ECE	:	Early Childhood Education
EFA	:	Education for All
FPE	:	Free Primary Education
KIE	:	Kenya Institute of Education
KISE	:	Kenya Institute of Special Education
MDGs	:	Millennium Development Goals
MOEST	:	Ministry of Education Science and Technology

ABSTRACT

The purpose of this study was to investigate the effect of learning environment on reading comprehension among pre-unit children in Kikuyu Division, Kiambu County. The objectives that the study sought to achieve were: Establish whether the learning environment facilitates learning activities used by teachers, determine types of instructional materials used and find out how teachers use the learning environment to facilitate reading comprehension. The researcher reviewed wide range of literature that relates to: concept of reading, language activities, learning process and learning environment. The study used descriptive survey design to get information from eight pre-schools sampled by administering a questionnaire to teachers. The researcher also used an observation checklist to record resources in learning environment. The data was analyzed using descriptive statistics which involved tabulation of data into frequencies, percentages, and tables. Analysis of the results revealed that factors that affect reading comprehension are: a lack of adequate facilities, failure to use appropriate teaching methods among others. Results of the study indicate that there is a need for the pre-schools to be incorporated in the Free Primary Education (FPE) programme so that the government can supply them with teachers, funds to buy materials and build facilities. Pre-school teachers should expand children's vocabulary by exposing them to a variety of learning materials.

Introduction

1.1   **Background to the study**

According to the National Early Childhood Development Policy Framework (2006), the world conference on Education for All (EFA), that took place in Jomtien, Thailand in March 1990, articulated the significance of the early years as the foundation for the life of an individual. Heywood (1989) affirms this by stating that the first five years of a child's life are of immense importance to his or her subsequent development. The experiences of this period are known to either enhance or inhibit realization of one's potential. It is also the period when children are able to learn and acquire certain skills, knowledge and attitudes very quickly with minimal effort and it is the fastest period of growth and development in all aspects. KIE (1994) explains that the period is vital for ensuring proper physiological growth and a crucial period for significant health and nutrition interventions to put the child on the right track of life and that environmental influences especially care, nurture and stimulation have the greatest impact on the brain. Heywood (1989) states that parenthood real or surrogate is of tremendous significance in the development of the child. This is emphasized by Comprehensive Early Childhood Developmental Policy Framework (2006) which states that the primary caregivers of children who include parents and those who provide care for children in their absence should ensure that holistic needs of young children are met to maximize the realization of their full potential. It is then clear that Early Childhood Education is very important if children are to grow well.

The Kenyan Government has demonstrated commitment to the well being of young children by signing various global policy frameworks. These include the 1989 United Nations Convention on the Rights of the Child (CRC), the 1990 African Charter on the Rights and the Welfare of the Child (ACRWC) and in 2000 the Millennium Development Goals (MDGs). In the year 2000 Kenya also participated and endorsed the deliberations on World Education Forum in Dakar, Senegal. All these global policy frameworks emphasize the importance of education of the young children in particular the Dakar framework which contains six goals. One of the goals is improving all aspects of the quality of education and ensuring excellence of all so that recognizable and measurable learning outcomes are achieved in literacy, numeracy and essential life skills (K.I.E. 2008, Mwanamwende 2004).

In Kenya one of the objectives of ECDE is to provide education geared towards development of the child's exploration skills, creativity, discovery and self expression (K.I.E. 2008). For this objective to be achieved, the learning environment must be suitable with the necessary learning materials. Mwamwenda and Mwamwenda in 1987 carried out a study on the effects of schools physical or learning facilities on the performance of children in Botswana. It was established that the availability of facilities had a direct link with the performance of the pupils. The availability of classrooms, laboratories, desks and books has a direct bearing on good performance. Garry (1965) states that parents would identify one of the objective of schooling as the ability to communicate effectively, read, write, speak, have knowledge of environment, ability to participate in sports which involve learning to function not only in the physical environment but especially in the man made part of the environment through knowledge

of the language, number, technology, customs and traditions, Alistajahtana (1976) affirms this by saying language is nothing else than the most important means of communication in society as well as the most elaborate system of concepts that mirror thoughts, ideas, feelings of a culture and the whole life and worldview of its users. Halliday (1977) states that the role of language in education process is a special aspect of the relation between language and social structure since language is the principle means of culture transmission. Language empowers children to participate fully in education programme, providing them with tools to interact with others and present their thoughts and feelings (Kate, Penny 2002).

Jean Piaget (1896-1980) believed that children construct knowledge as they act physically on the environment. They develop mental images known as schemas and begin to reason logically as they play, manipulate, explore, observe and experiment with objects in the environment (Garry, 1965), He thus emphasized learning through senses. They do this as they play and manipulate the objects. He taught that language influences thought and thought influences language. Hamachek (1995) explains that information that is merely rehearsed fades in a matter of seconds (short term memory) and information that is processed to a greater degree is more likely to end up in long term memory. He continues to state that information processed both visually and verbally is retained better. Also unused information fades away quickly. This indicates the reason why teachers should use instructional materials when teaching reading and labeling items in the school and class so that children can read the words any time they see these items.

Curtis (2000) states that low proficiency in the language of instruction creates communication problems in many classrooms and also has a negative impact on teaching

and learning behaviour as children fear to participate so that they are not ridiculed by others. Kibui (2006) in her study the relationship between proficiency in English language comprehension and vocabulary among learners in selected Kenyan Secondary Schools concurs with Hamachek (1995) as one of her findings is that learners fail in comprehension, questions because of failing to transfer information into the long-term memory.

There are four skills in language learning and reading is one of them.   According to Lapp, Flood (1985) most educators agree that the reading process includes letter and word recognition, comprehension of the concepts conveyed by the printed word(s) and reaction to and assimilation of the new knowledge from the printed page with the readers past experience. As such teachers must ensure that children are able to read and also understand what the printed word(s) intend them to understand. If they are unable to do so then the performance not only in English language but also in other subjects will be poor. They should provide instructional materials that enable the children to grasp concepts easily. Moyle (1982) states that classroom should be an exciting place with lots of things to do, see and talk about. He adds that interesting exhibits and pictures carefully captioned and regularly changed should always be present.

Language growth is encouraged by a curriculum that introduces interesting and stimulating objects, experiences and concepts as well as creating a classroom environment that is set up to invite small groups of children to work together and thereby promote language use and achievement (Lock head, 1990). K.I.E. (1997) sets out essential facilities in preschools as land, building sanitation facilities, kitchen, storage space, office, outdoor space and equipments and materials. According to National Early

Childhood Development Policy Framework (2006) parents and local communities manage over 70% of the Childhood Development Centres with limited Money and inadequate materials. The reason being many parents are poor and are not able to raise even the minimal fees which is required to pay salaries of teachers, to buy equipments, learning and play materials and to construct buildings.

Kikuyu division consists of people with varying sources of income. Some parents have high income whereas others have low. This has led to there being private and public ECE centres. Most private ECE's are owned by individuals who are able to provide good facilities and employ qualified teachers who are motivated as their salaries are high. These same schools have a lot of play and learning materials as well as adequate facilities. In such schools, people with high levels of income take their children and when these parents are called upon to contribute to the pre-schools they do so generously.

On the other hand, public pre-schools and the few private ones owned by individuals with low income do not have good facilities, teachers are less motivated as the salary is low and sometimes it is delayed. Play and learning materials are inadequate, and classrooms are normally in poor conditions. This leads to poor performance and it is in these schools where people with low incomes take their children. For children to perform well, they must be able to read and understand what is required of them. There was need therefore to carry out this study on the influence of learning environment on reading comprehension in English with a view of establishing how reading comprehension can be improved.

1.2   Statement of the problem

Parents and local communities manage over 70% of all ECE centres. This means that they have to cater for the cost of running them almost entirely on their own as the government budgetary allocation is about 1%. This brings about a lot of disparities in ECE centres as parents are not economically endowed the same way even in Kikuyu division. The parents with high levels of income are able to raise the required fees which are used to buy equipment, learning and play materials, construct buildings and pay well trained teachers' salaries. As for the parents with low income, paying even the minimal fees required is a problem. In such pre-schools physical facilities are in poor conditions with no proper equipment, learning and play materials and teachers who are not motivated. In Kikuyu division, there are parents with varied levels of income, with some having high income while others having low income. This leads to there being different categories of pre schools.

One of the skills taught in language learning in pre-schools is reading comprehension which is crucial in determining the performance of almost all other subjects. In the pre-schools reading readiness skills are taught and their mastery prepares the child for primary and higher levels of learning as almost all subjects are tested in English. It is therefore important for children to be able to read if they are to perform well. This can happen if the learning environment has the required resources and there are enough trained teachers who utilize the learning environment well. It is on this ground that the researcher conducted a study on the influence of learning environment on reading comprehension in English among pre-unit children in Kikuyu division, Kiambu County.

1.3   **The purpose of the study**

The purpose of the study was to investigate the influence of learning environment on reading comprehension in English among pre-unit children in Kikuyu division, Kiambu County.

1.4   **Research objectives**

The study sought to address the following objectives:

- Establish where the learning environment facilitates learning activities used to enhance reading comprehension in English language for pre-unit children in Kikuyu division Kiambu County.

- Determine types of instructional materials found in the learning environment and whether they are   used to enhance reading comprehension in English language on pre-school children in Kikuyu division Kiambu County.

- Find out how teachers use the learning environment to facilitate reading comprehension in English language in Kikuyu division Kiambu County.

1.5   **Research questions**

- How does the learning environment, facilitates activities used by teachers to enhance reading comprehension?

- What are the instructional materials found in the learning environment and used by teachers to enhance on reading comprehension?

- How do teachers use learning environment to facilitate reading comprehension?

1.6   **Significance of the study**

It is hoped that this study will shed light on how to improve the learning environment and teaching/learning of reading comprehension in English language in pre-schools. The findings might be used by curriculum planners and implementers in selecting and developing instructional materials and equipment that can aid the teaching and learning reading comprehension. Policy makers might also benefit as the findings of the study may guide them in formulating policies that will improve the teaching and learning of reading. Teachers might also benefit from the study because when policies regarding physical facilities are made, they will be working in areas that are comfortable and they will know the best instructional materials to use. Children will be the greatest beneficiary because when learning environment is improved they will learn better and in an interesting way as it will be easier for them to grasp concepts as well as making education an enjoyable experience. The study might also motivate future researchers to conduct more research on specific facilities that affect reading comprehension.

1.7   **Limitations of the study**

This study included pre school teachers and children in Kikuyu division which was just one among many divisions in the country, as such care was taken not to generalize the findings. The researcher explained the importance of the study to ensure respondent answered honestly and accurately.

1.8   Delimitation of the study

The scope of this study included pre-unit children in 12 public and 18 private pre-schools, with a population of about 1550 children and 80 teachers in Kikuyu division, Kiambu County. The study focused on learning environment in the class and within the school compound.

1.9   Assumptions of the study

This study assumed that the resources in the learning environment affected how children mastered their reading readiness skills.

1.10   Definition of key terms

In this study the following terms mean:

Preschool children: Children between 3-6 years of age.

Teachers: People teaching in pre-schools

Pre-school: It is an institution of children between 3 and 6 years.

Learning environment: A place where learning takes place with all the facilities, equipment, instructional materials and human resources.

Reading comprehension: Ability to recognize letters, read words and sentences, interprets them and describe details in pictures.

1.11   Organization of the study

This study is organized into 5 chapters. The first chapter discusses the background, statement and purpose of the problem, research objectives and questions, significance of the study, limitations and delimitations of the study as well as definitions of key terms. The second chapter deals with literature, theoretical, and conceptual framework. The third chapter explains the methodology employed under the subheadings: research design, target population, sampling procedure, research instruments, validity and reliability of instruments, data collection procedure and data analysis. Chapter four dwells on the analysis of the findings while the fifth chapter concludes and gives policy recommendations.

LITERATURE REVIEW

2.1   Introduction

This chapter deals with the literature reviewed by the researcher that relates to learning environment and reading in pre-schools. A wide range of relevant literature was consulted with special reference to literature regarding concept of reading, language activities, learning process, learning environment: teaching approaches, instructional materials and physical facilities and equipment. Finally is the theoretical and conceptual framework.

2.2   Concept of reading

Most educators agree that the reading process is a complex learning activity in which readers are required to demonstrate control of a number of variables simultaneously (Lapp, Flood, 1985). At word level readers should understand letter formation, sound of letters, pronunciation and comprehension of the concepts conveyed by the printed word(s) and reaction to and assimilation of the new knowledge from the printed page with the readers past experience. Moyle (1982) states that reading is turning the collection of symbols seen upon a piece of paper into talk or in the case of silent reading into an image of speech sounds. This means gaining the ability to read from left to right and from top to bottom of the page, the recognition of letter symbols and their grouping into words. Smith (1988) explains that the two basic necessities for learning to read are the availability of interesting materials that make sense to the learner and an understanding and more experienced reader as a guide.

Moyle (1982) states that children are motivated to read after realizing that what they are reading is useful to them at that moment in time. It will also aid transfer of learning from one situation to another and ensure the coverage of all media and skills used in adult society if over the years children can explore a wide variety of human purposes. This means that children should be exposed to a broad range of written language media as they differ in reading strategies and skills employed if they are to read effectively. Smith (1988) agrees with Moyle by stating that printed materials and products that make sense to children in the outside world can be brought into the classroom. For example, identification of various classrooms and offices, direction signs, timetables, maps among others. Gass, Selinkar (2001) write that the roots of literacy are to be found in what she terms as 'functional literacy,' that is literacy which is found in real-life contexts and serves a real purpose for example the child sees an adult reading a newspaper, letters, invitation cards books and so on. These activities support children's literacy development both overtly and covertly. According to Hobert & Frankel (2000) parents provide resources and opportunities for access to print. Major resources at home are in the form of books, mail, newspaper, magazines among others.

2.3   **Language activities to develop reading readiness skills**

Eyres, (2004) explains that children use language to obtain something, control the behaviours of others, interact with others, express personal feelings, find out and give information and for imaginative purpose. Heywood (1989) agrees with the above view by stating that language has a regulative function for it co-ordinates, stabilizes and facilitates other forms of behavior.

K.I.E. (2008) defines language as a means of communication and through language people expresses their desires, ideas, excitement, amusement and disappointments. By using language children talk to each other and discuss their interests and also their surroundings. Lapp, Flood (1985) explains that children need to possess certain oral language skills before reading. For children to acquire oral skills they must hear the language being spoken for them to imitate. Whitebread (1990) states that pay attention to and learn from input that is slightly more advanced than their own.

Smith (1988) affirms that children who have learnt to comprehend spoken language and who can see sufficiently well to distinguish a pin from a paper clip on the table in front of them have already demonstrated sufficient language, visual acuity and learning ability to learn how to read. K.I.E (1994) explains that to foster development of speaking and listening skills the teacher should establish a relaxed atmosphere in which children freely exchange ideas, share information and ask questions. Teachers can help children achieve listening skills by selecting a time during each day when they can stand quietly to listen to the everyday sounds around them. The main medium according to Curtis (2000) is through listening to nursery rhymes, poetry and short stories. This will help them grasp quickly the sound of letters and syllables taught by their teachers, leading to the correct pronunciations of words.

 In order to extend vocabulary, teachers can label and put signs on interest tables and also displays so that children become used to seeing the written word. When a teacher is deciding on the activities to choose there are various things that must be considered. One of them is that the activities must have potential and must help children to listen (Curtis, 2000). Children also need to be involved as young children are happier when they are

being active. Stories should be used because they develop listening ability, concentration and are a rich source of ideas. They also stimulate children's thinking and imagination. Children also learn vocabulary in a context and that letters are used to create words as well as learning how books work (K.I.E., 1990, Tassoni et al, 1999).

Reading skills involve the training of children to look at and interpret details in pictures, objects or symbols. As such there should be instructional materials in class for children to observe and describe. Children enjoy looking at pictures and interpreting, laughing at and chatting about what they see (K.I.E. 1990) Pictures on familiar things and events enable children to develop interest in them. According to Tasson, et al (1999) young children learn by observing what happens when they interact with materials and people. Teachers are therefore required to plan activities in such a way that there is sufficient variety to meet the needs and interest of each child.

Children need to be taught visual discrimination. Teachers can use games for recognition of pictures, colours, letters and words. Children can be asked to match letters with pictures. An example is the lotto game where a master card with six or more pictures in a sequence is drawn corresponding to every picture and they are supposed to be used in covering pictures on the master cards. (K.I.E., 2008) letter recognition can be taught by letting children match same letter shapes from two groups of letters, teaching children the letters of their names. They can trace letters from stencils, drawing letters in sand or clay, or writing letters on chalkboard with water and watching them 'mysteriously' disappear (Lapp, Flood 1985).According to KISE (2002) to familiarize learners with the letters of alphabet they can be asked to trace over printed word/letters with the fingers while sounding them, building up letters and words with clay or plasticine or practice

marking similar letters in a newspaper. Smith (1988) states two basic necessities for learning to read as the availability of interesting materials that make sense to the learner and an understanding and more experienced reader as a guide. He also states that teachers can try to ensure children often have an opportunity to read or to hear stories that have an intrinsic appeal to which they will voluntarily give attention.

2.4   **Learning process**

Mwamwenda (1995) defines learning as a change of behavior as a result of what one has experienced and may be shown in the way a person thinks (cognitive), acts (psychomotor) or feels (affective) Ingule, Rono and Ndambuki (1996) defines learning as a relatively permanent change in behavior traceable to experience and practice. The teaching and learning processes, is a process of communication between individuals, but only if people share common meanings and experiences can learning take place (Whitebread, 1996). As such children must have a language with which to express what they have learnt in terms of answering questions. Mwamwenda (1995) states that a child does not learn to talk until he is old enough and even then he must be exposed to an appropriate environment in which he hears a language in the spoken form. Whitebread (1996) continues to say that for learning to take place thoughts must first be encoded into some form of verbal or visual symbols.

Teachers use learning resources particularly when introducing a wide range of different types of learning experiences to the children or giving information which seems to be difficult to the learner. Garry (1965) states that before introducing any new concept to the learner, judgment has to be made as to whether, he or she is ready to learn the task.

Once judgment has been made the teacher must match the curriculum to pupils' needs and not vice versa. Mwamwenda (1995) says that Bruner argues in favor of a spiral curriculum in which the same subject is presented repeatedly but in a hierarchical manner beginning with fairly simple subject matter and becoming more complex as progress is made.

The level of interest determines the effort children put on the work they are doing. The greater their interest, the harder they will work. Pupil's interest in improving their performance is reflected in the number of trials and errors they will engage in before arriving at the correct solution (Turner, 1984). He continues to say that according to Thorndike satisfying state of affairs leads to repetition of a given behavior. Ingule, Rono, Ndambuki (1996), state that a response followed by reinforcement, will be more likely to re-occur when the organism find itself in a similar situation, to that which surrounded the behaviours first occurrence. The consequences of a response determine whether it is learned or not. When learning language, reinforcement comes from parents, siblings, caretakers and their peers. Turner (1984) says that in Thorndike's law of exercise, a strong bond is established between a stimulus and a response as a result of practice. The more a skill or body of information is practiced, the more it will be mastered, applied and retained in memory. For reading skill to be developed it is important for teachers to make sure that children have print materials in the environment. Objects in class and in compound can be labeled as this will offer an opportunity for children to read the words every time they see them.

A child pays attention, sees what the model is doing and finally come up with own creativity. Therefore, observation is important if children are to learn from the models.

Hergenhahn, Olson (1988) state that Bandura viewed observational learning as primarily a cognitive process which involves a number of attributes distinctly human, such as language, morality, thinking, and self regulation of one's behaviour. Lapp, Flood (1985) describes cognition as the intellectual functioning of the human mind and is characterized by remembering, comprehending, focusing, attention and processing. For children to be able to read they must pay attention to what the model teaches on sounds, remember what the model say and understand what has been said. Curtis (2000) says that the influence of family reading habits is long lasting as there is evidence that a child whose involvement in stories has begun well before the age of 3, is likely to be the best listener at thirteen. He further states that education needs to direct the children's attention towards salient features or objects and by careful questioning encourage discussion and understanding.

2.5   Teaching Approaches

Garry (1965), states that children are reared in a man-made environment consisting of physical objects, tools, language, customs, skills, attitudes, and beliefs. He further adds that whatever is being learnt in school should have some relevance to life, outside of the school and that the instructional procedures followed should demonstrate the connection and possible application. Moyle (1982) has the view that the most important factors in choosing methods (teaching techniques) and instructional materials are the individual needs of the children who are to be taught. But the teacher according to him is forced in the final analysis to make a selection based on the average needs of the group.

There are many methods that teachers can use to ensure that children benefit from what is being taught. One of these methods is collaborative learning. MOEST (2001) states that collaborative learning, is an approach whereby children are empowered by others to attain the established goals. For all children to benefit from the method the teacher need to group them. Slow achievers can benefit from working with high achievers. Woolfolk (2004) explains that the approach requires scaffolding where children are given information, prompts, reminders and encouragement at the right time and in the right amount. The teacher is required to adopt materials and problems to the children's current level.

Turner (1984) describes basic motives of a child as physical comfort, safety and security, affection, approval and self esteem, each in the context of a particular family having its unique behaviour patterns and value systems. He adds that in school and classroom a number of sociological and psychological factors are operating to create special conditions that influence the course of events. Teachers can use responsive classroom approach to ensure that children have social emotional skills which contribute to effective learning. Children need to feel confident about themselves and be sure that they are valued. If they do not feel confident about themselves and be sure that they are valued they find it difficult to learn (Herbert, Frankel, 1988).

Another approach is reflective teaching which MOEST (2001) describes as thinking about ones teaching through both self evaluation and evaluation by colleagues. The teacher can think about the needs of individual children, resources available, when and how to use the resources, and how to organize them to facilitate learning.

2.6.1 Learning environment

MOEST (2001) describes learning as a life long activity that begins from the time we are born and goes on until we die. As we interact with everything and everyone around us, we are continually involved in learning.

Hergenhahn, Olson (1988), state that Jean Piaget a Swiss psychologist believed that children construct knowledge as they act physically on the environment. They develop mental images known as schemas and begin to reason logically as they play, manipulate, explore, observe and experiment with objects in environment. According to them Piaget also emphasized learning through senses of touch, smell, sight, hearing and taste as they play and manipulate the environment. They further explain that Dr. Maria Montessori believed that most learning should be through use of all senses. She believed that when these senses are well developed, children acquire information and skills and whatever they acquire they remember them better and for longer period. According to her the role of the teacher is to facilitate learning by providing materials and demonstrating how they are used.

According to Woolfolk (2004) Froebel (1782-1852) emphasized the importance of environment. He believed that the role of the adult is to provide materials, give children ideas and help them grow and develop at their own pace. John Dewey (1859-1952) believed that learning should be actively involving. He put emphasize on learning through activity and by doing. Bruner believed that cognitive development precedes development of language in children. Long before children are able to speak, they have a lot of knowledge, concepts and ideas. As they grow older they use language as a vehicle

to communicate their thought and ideas. He emphasized that the immediate environment of children should be used as the basis of learning all concepts, knowledge and skills (Mwamwenda, 1995). As such teachers should make sure that the learning environment enhances reading by having centres of interest and allowing children to play games.

From the above discussion on contribution by educators/philosophers, it is then evident that learning environment is important in the learning of children as well as involving all senses of children as they learn. According to Lockhead (1990) the environment of the Early Childhood Program is an important factor in facilitating language learning instructional materials and other facilities are very important in children's learning.

2.6.2 Instructional materials

Instructional materials increase learning as they generate more interest and create a situation where the learner would fully engage in classroom and outdoor activities. Adequate use of instructional materials also give the learner practical experience which can help him develop skills and concepts more easily (K.I.E 1990). According to Woolfolk (2004) the immediate surrounding is probably the best source of learning resources we require in our classroom and outdoor activities since it provides us with real life things. Whitebread (1996) concurs with him as he explains that interactive displays in the pre schools, thematic collections of carefully selected resources entice pre-schoolers to explore a wide range of ideas. Materials need not be very expensive as teachers can make them from locally available materials and they can use own initiative to suit their individual needs. The materials also make sense to the learners as they are from things that they know.

Children are active learners and if they are to develop the skills and competence, they must be able to work and play in a safe and secure setting. Materials should be organized in such a way that opportunities for learning and discovery are maximized. K.I.E (1990) states that the provision and arrangement of the furniture and equipment can affect the way children work and play. The materials should be put in learning centers (corners) on the basis of activity areas or themes. In these interest corners children and teachers can place articles brought from home which relates to the topics which have been dealt with in the classroom. Other tables may be covered with articles and equipment designed to develop awareness (Smith, 1988).

Akolo (1978), states that instructional materials are facilitators of teaching and learning processes when used properly. They provide opportunity for learner centered method of education. They also arouse learners' interest, stimulates imaginations, raise questions for discussion and desire to find more or solve some problems. Smith (1988) points out that, teachers are required to plan activities in such a way that there is sufficient variety of materials to meet the needs and interests of each child. For example if a teacher is teaching letters of the alphabet, every time a letter   is taught children can be asked to get an item from the interest corners that   begin with that letter. This would make learning meaningful when they realize what they learn is in their class.

Instructional materials are classified under visual and audiovisual materials. Visual materials refer to aids which promote learning through seeing only. They include blackboard, charts, film, slide, drawings, maps, magazines, calendar, flip charts and white boards, Print media is very popular to reach the target and include: texts, microfilm, encyclopedia, newspaper and teacher prepared handouts. Audio- visual materials refer to

aids which promote learning through seeing and hearing. A good example is television. Kemp (1968) points out that audio visual materials result in greater acquisition of Knowledge of facts and ensure longer retention of the information gained. Ayot (1987) adds another category which is environment resources. These are things found in the world around us. To him the immediate surrounding is probably the best source of instructional materials required in the classroom and outdoor activities since it provides real life things. The utilization of the environment in teaching and learning exposes the children and teachers to everything that affects their lives. Children can be asked to model letters that they have learnt or an animal whose name they learnt in class. If all instructional materials are used effectively then children would have no problem in reading.

Moyle (1982) states that classroom should be an exciting place with lots of things to do, see and talk about. Interesting exhibits and pictures carefully captioned and regularly changed should always be present. There should be a plentiful supply of attractive books and display and usefulness made obvious by directing the children to an illustration. Ayot (1987) points out that, instructional materials prevent children from being passive and therefore retain much of what has been learnt. As Montessori and Piaget believed when all senses are used in learning the retention rate is higher, Hergenhahn, Olson (1988) state that in lecture method the retention rate is only 5%. The teacher should then plan her/his work with activities that will involve all the five senses Gagne (1992) states that learning resources refer to printed or other materials intended to convey events of instruction. He advises that in selecting learning resources the teacher is expected to make decision based on lesson plan.

The use of real objects, pictures and sketches assist in focusing children's attention and sustain their interest in the lesson for a much longer period than would be if the teacher relied on lecture method (Kabiru and Njenga 2004). The pre-school teacher can use thematic method to teach about the color, shape, and names of objects in class. For example a child can be asked to color   the box in the second line that contains the same letter as the box on the first line. If teachers prepared the lessons well and use instructional materials effectively then reading would not be a problem in pre- schools and even in higher levels.

2.6.3   **Physical facilities**

K.I.E. (2007) informs that the preschool buildings must meet the basic standards of space, with facilities necessary for comfort and safety of young children. They should have toilets and outdoor play equipment and space. Play is very important to children's growth in all aspects. Woolfolk, (2004) points out that Maria Montessori once noted, and Piaget would agree with her is that play is children's work. Brain develops with stimulation and play provides some of that stimulation. Bruner (1972) states human beings play more and for longer and is supreme in ability to learn. Crucial aspect of human intellectual ability which enables him to learn so effectively is our flexibility of thought and suggests play as all about developing flexibility of thought. According to Eyres (2004) as children play with others and objects around them they start to learn more about them; language is used and expanded in almost every early childhood activity in which they participate. O. Hagen, Smith (2002) state that, deprived of play the child is a prisoner, shut off from all that makes life real and meaningful. Play is not merely a means of learning the skills of daily living. The impulse to create and achieve, working

through play allows the child to grow in body and mind. Whitebread (1996) writes that Bruner described language as a tool of thought, providing children with relevant vocabulary and requiring them to formulate their own ideas in discussion.

Pre-schools must have adequate sanitary facilities. There should be a supply of clean water for drinking and washing hands. School building should have more space for storage, office facilities and a kitchen if any refreshment or food is provided by the school. Tassoni (2002) states that furniture and fittings such as sinks and toilets need to be child sized. This is because they have effect on children's physical development as it can affect their posture, and the degree of fatigue they suffer.

Classrooms should have lockable doors and windows. He says that teachers work comfortably in lockable classrooms (Gakuru, 1982). Cupboards and shelves with several divisions needed for storing materials. They should be low enough so that children can learn to take out and put back materials on their own (K.I.E, 2007). It also recommends that for a class of 40 children the room should be 8m x 10m to give enough space for children to move about and play actively. Lapp, Flood (1985) comments on class size that teacher ratio affects the internal efficiency of schooling, They state that the larger the class or higher teacher pupil ratio, the lower the students achievement, reading being one of the achievements affected, Orodho (2003) agrees with them as he has stated that large student number make it difficult for classroom management and effective teaching. Nguru (1986) is of the same opinion that large classes make it difficult for teachers to cater for individual differences in terms of ability and motivation.

2.7   Theoretical Framework (Constructivist Theory)

Woolfolk (2004) states that constructivism is based on the premise that we all construct our own perspective of the world through individual experience and schema. Tassoni (1999) constructivist theories suggest that children learn from action and exploring their own environment. Jean Piaget the Swiss psychologists was a constructivist. One of his fundamental insights was that individuals construct their own understanding: learning is a constructive process at every level of cognitive development (Woolfolk 2004). According to Herganhahn, Olson (1988) to Piaget, intelligence allows an organism to deal effectively with its environment. The schemata available to an .organism will determine how it can respond to the physical environment hence this study was anchored on this theory.

Mwamwenda (1995) writes that Piaget believed that learning is a constructivist process at every level of cognitive development. He believed that children construct knowledge as they act physically on the environment. They form images known as schemas and begin to reason logically as they play, manipulate, explore and experiment with objects in the environment.

He also emphasized learning through senses of touch, smell, sight, hearing and taste (Woolfolk, 2004). Piaget also taught that language influences thought and thought influences language. This means that children clarify their concepts when they label things or talk about what they see or do. When they acquire many concepts and experiences their language improves. According to him children must be actively involved in the learning activities.

Lockhead (1990) agrees with Piaget as he states that language growth is encouraged by a curriculum that introduces interesting and stimulating objects, experiences and concepts as well as creating a classroom environment that is set up to invite small group of children to work together and thereby promote language use and achievement.

Teachers should therefore ensure classes have a lot of instructional materials and enough space for children to move as they interact with materials. The teacher's role is that of a facilitator as the method of learning is that of child-centred approach. According to Woolfolk (2004) all children need to interact with teachers and peers in order to test their thinking, to be challenged, to receive feedback and to watch how others work out problems. Preschoolers are in operational stage and love pretend play and through pretending they form symbols, use language and interact with others. To Piaget the role of language and private speech is critical for cognitive development. It provides a means of asking questions and expressing ideas, the categories and concepts for thinking, and the link between past and the future. For children to learn in almost all subjects they need to have the language and understand what they are being asked.

2.7   Conceptual framework

This study has identified the following independent variables as the ones that directly affect reading comprehension in Kikuyu division. They are language activities used by teachers to enhance reading comprehension, types of instructional materials and utilization of learning environment.

Figure 1: Conceptual framework

```
                    ┌──────────────────────────┐
                    │                          │
         ┌──────────┴──────────────┐           │
         │ Language activities     │           │
         │   • Sorting and grouping│           │
         │     items               │           │
         │   • Describing objects  │   ┌──────────────────┐
         │   • Playing games       │   │ Role of the      │
         │   • Reading letters,    │   │ teacher          │
         │     words               │   ├──────────────────┤   ┌──────────────┐
         │     and sentences       │   │ Role of the      │   │   Reading    │
         │                         │   │ headteacher      │   │ comprehension│
         └─────────────────────────┘   │                  │   │              │
                    ↑                   │ Role of the child│   │              │
                    │                   └──────────────────┘   └──────────────┘
         ┌─────────────────────────┐
         │ Types of instructional  │
         │ materials               │
         │   • Visual aids         │
         │   • Audio visual aids   │
         │   • Real objects        │
         └─────────────────────────┘
                    ↑
                    │
```
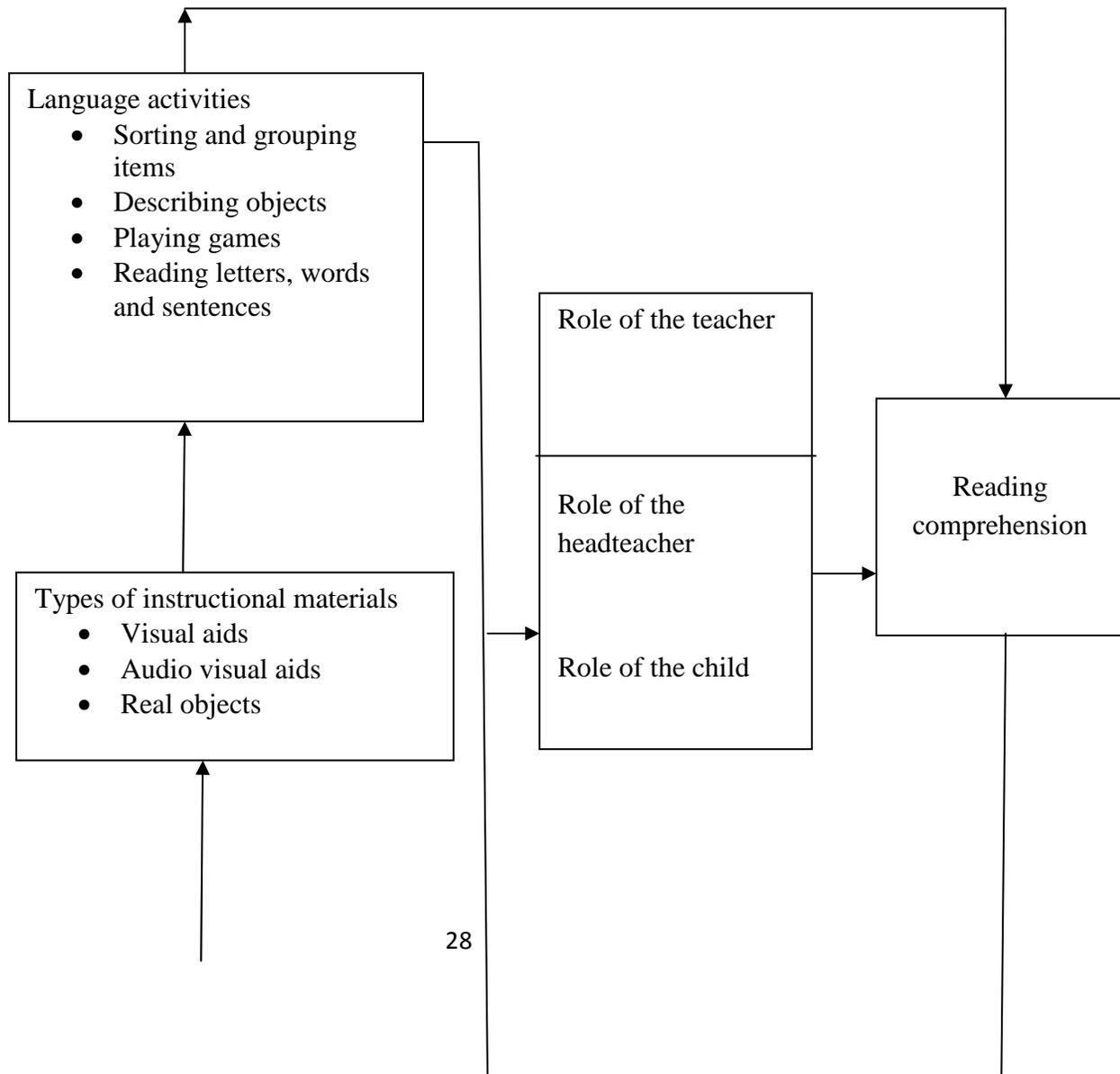
```
┌─────────────────────────────┐
│ Utilization of learning      │
│ environment                  │
│      • Instructional materials│
│      • Teaching approaches    │───
│      • Resources              │
│      • Playing materials and  │
│        equipment              │
└─────────────────────────────┘
              ▲
              │
              │
              └──────────────────────────
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METHODOLOGY

3.1   **Introduction**

This chapter comprises research design, target population, sample and sampling procedure, research instruments, validity and reliability of research instruments as well as data collection procedure and data analysis method.

3.2   **Research design**

This research used descriptive survey design which is a method that involves collecting information from members of the target population by administering questionnaire so as to determine the current status of the population with respect to one or more variables (Mugenda and Mugenda,1999).This design was suitable for this study because the researcher was seeking information about the learning environment and reading comprehension without manipulating any of the variables or arrange for events to take place.

3.3   **Target population**

The target population of this study consisted of 12 public and 18 private pre-schools, 1550 children and 80 teachers in Kikuyu division, Kiambu County.

3.4   **Sample size and sampling procedure**

Mulusa (1988) states that the minimum number of subjects to work with is 20% this study will used 25% of the population hence 3 public, 5 private preschools and a pre-unit

teacher from each school sampled. This study used stratified sampling. Stratified sampling involves dividing the population into homogenous groups each group containing subjects with similar characteristics and in this study public and private stratum. The sample from each stratum was got through simple random sampling so that every individual had an equal chance of being selected and that each choice was independent of any other choice (Mulusa 1988). The researcher wrote all the names of pre-schools in each stratum on pieces of paper, placed them in a basket and then shuffled them. Blind folded the researcher picked one paper at a time until twenty five percent of the schools in each stratum were selected. Every teacher in the pre unit class was used to fill the questionnaire.

3.5 Research Instruments

The instruments used by the researcher to collect data were two: Questionnaires and observation checklist. The pre-school teachers answered questions from a questionnaire that they were given by the researcher. They answered questions which were divided into two sections. In section A, the teachers gave their personal information, how they teach reading, problems encountered as they teach and in section two they stated how they use instructional materials. The questionnaire had both closed and open ended questions. According to Best (1977) certain types of information are best obtained through direct examination. The researcher visited pre-schools sampled and observed learning environment which included physical facilities in the school and their conditions, activities used by teachers to teach reading, instructional materials used and how the children interacted with them. Also observed was the mastery of reading skills by children.

3.6   Validity of instruments

Validity is the degree to which results obtained from analysis of the data actually represent the phenomena under study (Mugenda and Mugenda, 1999). To ensure the instruments are valid my supervisors appraised them and their comments and suggestions were used to improve the instruments. For external validity pilot study was done the results were discussed with respondents for correction of wrongly structured questions and check for ambiguity. Ambiguous items were restructured while others were discarded. Simple random sampling was used to select the schools where pilot study was done.

3.7   Reliability of instruments

Reliability is a measure of the degree to which a research instrument yields consistent results after repeated trials (Mugenda and Mugenda 1999). To ensure reliability in this study, the researcher used test-retest method whereby the questionnaires were administered to the same group twice. Duration of one week was given before the group was given the same questionnaire for the second time and their consistency was checked.

3.8   Data collection procedure

The researcher sought permission from the National Council of Science and Technology and then submitted a letter of self introduction from the University of Nairobi to the DEO and a letter seeking permission to collect data from schools. The researcher visited the

selected schools and gave out the questionnaire, waited for the respondents to answer them before collecting them the same day. In pre-schools where teachers were unable to answer the same day a date was agreed upon when they were to be collected. This was also the same date when the researcher observed the teaching and learning of reading comprehension and the resources in the pre-school. The researcher sat in class the entire lesson as the teachers taught reading and then observed the resources within the school.

3.9   **Data analysis**

After data was collected the researcher went through the questionnaires to identify if there were unanswered questions or questions that were wrongly answered. What the researcher also checked from data collected were completeness, accuracy and uniformity of information observed. The items were coded for analysis. Then descriptive statistics was used to analyze data in order to determine frequencies and percentages of the responses to each question. These were calculated and presented in tabular form, percentages, and graphs. Inferences was   also be made from opinions of respondents.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings and their discussions. It begins with information on return rate, demographic information of the respondents and then discusses the main findings of the study in relation to the research objectives.

4.1.1 Return rate

Questionnaire was used as the instrument for collecting data. These were issued to teachers and they were duly completed and returned to the researcher in time. The return rate was 100% which was an excellent return rate. The purpose of the study was to find out the effect of learning environment on reading comprehension in English among pre-unit children in Kikuyu Division, Kiambu County.

4.1.2 Teachers' ages and experience

Table 1: Teachers' Age and Experience

Schools	Teachers' ages				Teachers teaching experience
	Below 25 years	26-35 years	36-45 years	Above 50 years	
1			1		Over 10 years
2			1		Over 10 years
3			1		Over 10 years
4		1			5-10 years
5		1			1-5 years
6			1		Over 10 years
7		1			5-10 years

8	1				1-5 years

The researcher sought to find out the ages of the pre-unit teachers and their teaching experience. This was aimed at finding out if the teachers' ages and their teaching experience affected the way they use the learning environment in their course of teaching reading comprehension as shown in table 1. 50% of the teachers in the sampled schools were between the age of 36-45 years, 37.5% between 26-35 years and 12.5% below 25 years. From table 1, the more years a teacher had, the greater the teaching experience, which means the teachers, started teaching when they were young.

The researcher noted that most teachers with long experience in teaching were able to interact with children better than those with less experience. They were also able to create and sustain interest throughout the lesson as they taught reading comprehension in English. Some of the less experienced teachers seemed to get annoyed when children kept on calling to get the teacher's attention. Age did not appear to have an effect on mastery of reading sills by children. This is because children taught by both young and middle aged teachers in different settings attained almost similar results as observed by the researcher.

4.1.3 Teachers' academic and professional qualification and mastery of reading skills

The study sought to find out the academic and professional qualifications of teachers and if they had an effect on the mastery of reading skills by children. The results were as shown in table 2.

Table 2: Teachers' academic and professional qualification and mastery of reading skills

Schools	Academic qualification	Professional qualification	% scores in reading skills
1.	KCE	E.C.D. Certificate	45
2.	Form 2	E.C.D. Certificate	77
3.	Form 3	E.C.D. Certificate	50
4.	K.C.S.E.	E.C.D. Certificate	62
5.	K.C.S.E.	Diploma training	73
6.	K.C.S.E.	E.C.D. Certificate	48
7.	K.C.S.E.	E.C.D. Certificate	55
8.	K.C.S.E.	Undergoing training	67

As shown in table 2, all pre-unit teachers were academically qualified to teach in those classes as they had acquired formal education. 6 teachers (75%) have attained that secondary education up to form four and 2 (25%) had done the form two examinations at the same time. All the teachers had professional training as 6 teachers had their ECD certificates while two were undergoing training. From what can be observed in table two, the level of education did not seem to either enhance or inhibit the way teachers taught and children's mastery of reading skills. For example, in school 2 and 3, both teachers had the same level of education but there was a difference in children's mastery of reading skills. In school 2, the scores were 77% while in school 3, the scores were 50%.

4.2.1 **Activities used in teaching reading**

The researcher sought to find out how pre-unit teachers taught reading and various activities were listed as shown in table 3.

Table 3: Activities used by pre-unit teachers

Activities	Number of responses	Percent
Games	5	62.5
Songs	7	87.5
Recitation	2	25
Modeling	3	37.5
Pictures	8	100

Children should be given many varied activities to help them develop their abilities and create interest and enjoyment. These can be achieved if teachers create a free and relaxed atmosphere in class so that children are able to explore, exploit and thereby realize their abilities. All teachers in the pre-schools visited were aware of this as shown in the responses they gave.

As the researcher observed, teachers with long experience in teaching used more activities that were interesting and that were able to help children remember what they had learnt for a long time. Children like having fun and being active participants. This was observed where teachers used songs and games when teaching. The teachers were also aware of the need to use materials and objects that make learners interested. For example, when teaching colour discrimination, items such as bags, uniforms, charts and

walls were used. However there were teachers who used recitation as a method of teaching new words. This method does not equip children with skills that can make them read words that they have not been taught.

4.2.2 **Problems that affect teaching and learning reading comprehension**

The researcher sought to find out if there were other languages taught in pre-schools and if those languages affected teaching and learning of reading comprehension in English. The researcher also sought to find out other problems that affected teaching and learning reading comprehension. The results were as shown in table 4.

Table 4: Problems encountered in the teaching of reading

Problems	Frequency	Percentage
Small space (classroom)	2	25
Lack of adequate materials	6	75
Absenteeism	5	62.5
Other language interference	5	62.5

Kiswahili was taught in all the pre schools as the teachers said. They also said that it affected teaching and learning of reading as children use Kiswahili sounds when reading English words. In schools where recitation was used as the main method of teaching, some children read words below pictures in Kiswahili. In some of the pre-school visited teachers were using Kiswahili and English was only used when they were being taught English as a subject. Therefore, when teachers use Kiswahili the whole day and English

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during English lessons only children will not have a chance to hear many words, and how they are pronounced. This is because children who have learned how to comprehend spoken language have already demonstrated that they are capable of learning how to read. Teaching and learning English is therefore made difficult as the classroom is the only environment where the child can hear and attempt to speak it.

Two teachers cited small space as being one of the problems affecting teaching and learning of reading comprehension. In pre-schools where classrooms were small the researcher observed that it impacted negatively on the teaching and learning process. The teacher could not move easily to reach every child so as to attend to him/her individually. The researcher also observed that some children were unable to see what the teacher was writing on the blackboard due to their position. Another negative effect observed was that when the instructional materials were issued, some children kept snatching from one another out of cheer mischief as each had been given his or hers. Also observed was that as the teacher attended to some children, others were busy playing with each other as they were very close. Children were not comfortable when reading due to lack of space.

Six teachers said that lack of adequate materials affected how children learn reading comprehension in English. Instructional materials make children active participants in their learning. In schools where these materials were used, children were seen to be enjoying themselves the whole lesson as the materials create and sustain interest. Instructional materials are also facilitators of teaching and learning and they provide opportunity for learner centred method of learning.

Four also cited children's absenteeism. Absenteeism, the teachers said was a major hindrance to children's mastery of reading readiness skills because they had to keep repeating what they had already taught for the sake of the absentees. The other problem cited was use of other languages both at home and in schools.

4.2.3 **Modes of testing reading**

When pre-unit teachers were asked how they tested children to find out if their reading skills had developed, they all said they used both written and oral tests. Oral tests help the teacher to asses if children understand what is being taught as the lesson is in progress. Written tests help the teacher to determine what an individual child knows. This is because the children rely on themselves and not repeating what they hear others say.

4.2.4 **Time spent teaching and learning reading**

The researcher sought to find out time spent in teaching and learning reading. Out of the eight pre-schools visited, 5 teachers said they spend 30-50 minutes, two use thirty minutes while one spends over fifty minutes.

Table 5: Table showing time spent teaching and learning reading

Time spent	Frequency	Percent
30 minutes and less	2	25
31-50 minutes	5	62.5
50 minutes and over	1	12.5
TOTAL	**8**	**100.0**

As the researcher found out, all pre-unit teachers thought the time they spent teaching reading was sufficient. Therefore, they did think more or less time should be allocated to the teaching and learning reading as they were satisfied with the time allocated.

4.3.1 Learning environment

Reading is a language and language is made up of words. Words reflect experiences because readers visualize objects and events thus forming images of the real world. Hence the more experiences readers have the more words they will have and they are likely to become proficient readers. This gives the reason why teachers should use a lot of instructional materials while teaching reading.

When teachers were asked if instructional materials have an effect on reading they all answered in the affirmative. This shows that all teachers were aware of the importance of instructional materials when teaching young children. Bearing in mind that all pre-unit teachers were trained or undergoing training, the training could be explained to have equipped them with necessary skills and knowledge of handling young children. They have also learnt the stages of children's development and this explains why they agree that instructional materials affect reading as stated by various philosophers like Jean Piaget, who believed that children construct knowledge as they act physically on environment.

4.3.2 Types of Instructional materials used by teachers

Table 6

Types of instructional materials	Frequency	Percent

Improvised (cards, wall charts)	8	100
Purchased (Books, plasticine, games clay)	3	37.5
Real objects	5	62.5
Audio visual	-	0

In all the pre-schools visited, most of the teaching materials indicated and observed were visual. Examples were: flash cards, blackboard, and wall charts, bottle tops with letters written, picture books and reference books. It was evident that these materials were easier to get and also make as most of those found were improvised by the teachers. This was shown when teachers answered the question on providers of instructional materials. 5 teachers said parents and 3 teachers said from the schools. All public pre-schools except one and the private ones with children from parents with low income were the ones who said from parents. This showed a great disparity in the kind of materials found in the two categories of pre-schools. Pre-school parents are the main financiers of pre-school education through the fees they pay. This means that if instructional materials are to be bought, it is through money contributed by them. This leads to some schools having more instructional materials than others. Some teachers used only one reference book as they indicated. Children depend on teacher's creativity to improvise teaching and learning materials depending with the resources available in the school and in the locality.

Other materials indicated were plasticine which was used in reading lessons by some teachers to model letters and animals. Others said they only used plasticine in creative activities.

When pre school teachers were asked the usefulness of instructional materials, they listed various reasons as shown in table.

Table 7: Uses of instructional materials

Uses of instructional materials	No. of schools	Percent
Making work easier	7	87.5
Creates interests	6	75
Saves teachers energy	2	25
Children understand easily and better	5	62.5

Though some schools had few instructional materials, it is clear that all pre unit teachers understood the need to incorporate them as they taught reading. Each teacher gave various reasons as to why they used the instructional materials. One of the reasons given was that the materials make children understand better and easily. This is in agreement with philosophers who believed that children understand better when they use more than one sense.

4.3.3 **Resources: Physical Facilities**

The researcher set out to find out the physical facilities that were in the sampled pre-schools, their conditions and if they were safe for the young children. Other things observed were the playground, play equipment and materials, furniture and sources of water. In all the pre-schools visited the researcher found that all public schools had a large playground while private schools had a small playground and others had no playground. Schools with no playground have a specific day when children go to a place with a field for games.

Play is an integral part of children's learning. When a school has no playground, it is then evident that children spend all their time in class and they are denied a chance to play. Philosophers like Maria Montenssori, and Froebel agree that play is very important to children's growth in all aspects. During play children are given a chance to stimulate their imagination, exercise competence and allow experimentation beyond the real level of development. Children also have a chance to imitate features of real world and they are able to exercise their bodies, which is necessary for their healthy growth. Some pre-schools had very big playgrounds but with few play materials. Some of the materials found in nearly all the pre-schools were: tyres, ropes and balls.

All the pre-schools visited had adequate classrooms. 2 were constructed using iron sheets and 6 using stones. All the pre-unit classes were cemented. However 3 of the pre-unit classes were small in terms of space as they did not meet the required size which should be 1 square metre per pupil. Thus they were congested and children did not have enough

space to move about and play actively. Ironically these were the same schools that did not have playgrounds.

All the classrooms had windows and lockable doors. These can ensure safety of furniture and instructional materials. Despite having lockable doors some teachers said they do not keep reading corners as they are destroyed by children from other classes when they are left. When inquired why they do not lock the doors, they cited that the school rules were that all classes are closed at the same time.

The researcher sought to find out the condition of the buildings in all the preschools visited. Three were in good condition, two needed minor repairs while the other three needed major repairs. Repairs needed included replacement of latrine doors and painting of the walls. In the five pre-unit classes in which schools needed some repair, the classes had a lot of dust. The charts hung had discoloured due to settled dust making some words unreadable. Dust also causes health problems which make children to be away from school. This could explain why some teachers listed absenteeism as one of the problems that they encounter in their course of teaching. They felt that they spent a lot of time teaching the same concept.

Some classes were also big in terms of space but the teachers failed to make use of every space and children were crowded in one place. This was observed especially where children used benches and big tables. The problem was evident in public and private schools which also had few resources. Furniture found in pre-schools was desks, chairs,

benches and cupboards. Some schools had benches and a long table for children while others had chairs and a small table. Cupboards were available in four schools and this is where materials were stored. In others their materials were stored in cartons. These storage facilities enabled teachers to keep materials they had made for future use.

4.3.4 **Library**

From the eight pre-schools visited libraries were from materials the teachers had improvised. Where libraries were present it was in pre schools that were attached to primary schools and they were only used by primary school pupils. Children in pre-unit classes depended on what the teachers had made like the picture books. Also during story time teachers read for them a story. They did not have the benefit of reading books that interested them but only what the teacher thought was fit for them.

Water is an essential commodity as it is used in many ways. For example washing classes, hands, utensils and cooking. When a school has a constant supply of clean water, diseases that are caused by germs from dirty water are minimized. Water is also used for activities like sinking and floating.

The researcher sought to find out if there is any relationship between resources in the learning environment and mastery of reading skills by children. The results were as shown in table 7

Table 8: Resources found in schools and mastery of reading skills

Schools Resources	No	1	2	3	4	5	6	7	8
Classrooms	√	√	√	√	√	√	√	√	√
Latrines	√	√		√			√		√
Store	√		√						
Cupboards	√		√	√		√		√	
Staffrooms	√		√		√	√			
Playground	√	√					√		
Swings	√		√						
Tyres	√	√	√	√	√		√	√	√
Ropes	√	√	√	√	√	√	√	√	√
Balls	√	√	√	√	√	√	√	√	√
Climbing lanes	√		√		√	√			√
Ladders	√		√		√	√		√	√
Kitchen	√		√		√	√		√	√
Language centres	√		√		√	√			√
Library	√								
Total scores on resources	15	6	12	6	8	9	6	7	9
% Scores in resources	100%	40	80	40	53	60	40	46.7	60
% scores in reading performance	100	45.7	77	50	62	73	48	55	67

The researcher observed the facilities in the pre-schools and rated them using the observation checklist. Every adequate facility observed was given a value of one and absence of a facility or inadequate facilities the value was zero. Total points on the facility were 15 representing hundred percent. To get the percentage for each school, total scores were divided by fifteen then multiplied by a 100.

The facilities in the school as shown in table 7 have an effect on mastery of reading skills. In schools where resources were available and adequate, mastery of reading skills was also high. However, the researcher found out that some facilities did not appear to have an effect on the mastery of skills. For example one public pre-school like has a small playground yet the mastery of reading skills was high.

4.3.5 **Mastery of reading skills**

The researcher observed how children had mastered their reading skills. Various items were listed and degree of mastery indicated, if mastery was very good it earned 3 points, good 2 points, fair 1 and no mastery a zero. If mastery was good in all the items observed, the total marks scored were 45 which represented a hundred percent. To get the percentage for each school, marks were added for each item observed, then divided by 45 and multiplied by a 100.

Table 9: Schools mastery of reading skills

School	Category	Percentage score
1.	Public	45
2.	Public	77
3.	Private	50
4.	Private	62
5.	Private	73
6.	Public	48
7.	Private	52
8.	Private	67

From what the researcher observed, the category of the school did not determine whether children were going to perform better or not. From earlier discussion what can be said to have brought the difference is how frequently teachers used instructional materials and how often children interacted with them. The schools with more facilities and learning materials scored higher marks than those with few resources. In the schools where teachers were dealing with individual children the scores were high in their mastery of reading skills.

4.3.6   Ideal Learning Environment

The researcher sought to find out what pre-school teachers understood by an ideal learning environment. Their responses were as follows:

- A school where teachers are friendly to children.

- Classes which are specious to allow free movement for teachers and children.

- Enough and appropriate furniture.

- Classes which are equipped with enough instructional materials.

- A place with enough plays equipment and materials.

Table 10: An ideal Learning Environment According to Teachers

Ideal learning environment	Frequencies	Percent
Friendly teachers	7	87.5
Appropriate enough furniture	6	75
Spacious classes	7	87.5
Enough instructional materials	8	100
Enough play equipment and materials	4	50

From the above table it is evident that all teachers were aware of the importance of instructional materials. Most of them also knew the importance of being friendly to children for them to learn. Young children need people who can act as surrogate mothers to take care of them, provide emotional support, and give instructions and guiding them.

CHAPTER 5

Summary, Conclusion and Recommendations

5.1 Introduction

This chapter discusses summary of the findings, conclusion, recommendations and suggestion for further study.

The researcher sought to find out the influence of learning environment on reading comprehension among pre-unit children in Kikuyu Division, Kiambu County. The summary is given as per the research objectives as follows:

5.2   Summary

There were various activities used by teachers to enhance reading comprehension. Most teachers used songs to teach letters and sounds. This showed that they were aware of the need to involve children in their learning .When children are involved in interesting activities they make them   remember more and for longer what they have been taught. Children also enjoy games and 65.5% of the respondents indicated that they use them. Games involve a number of senses like the sense of sight, touch and smell. Other skills like co-operation, competition and turn taking are learnt when games are used. Modeling engages children in refining their fine muscles and developing their manipulation skills, but only 37.5% of the respondents stated that they used it. Lack of money to buy the plasticine was cited by some teachers as the reason why they do not use them while others said they only model during creative activities.

In pre-schools where teachers made their lessons lively by creating fun, the mastery of reading skills was high. Also noted was that teachers with longer experiences used variety of activities that were fun. They also involved all children and attended to their individual needs. What all teachers seemed to be aware of was that instructional material enhance reading as evidenced by use of charts with letters, sounds, words and sentences. Those charts also had pictures and words written below them. This helped children to associate words with the pictures drawn.

Since all teachers were professionally trained the researcher concluded that they had the knowledge of the best activities to use when teaching. In nearly all pre-schools visited teachers were not engaging children for long in outdoor activities. When asked why they cited that the administration does not allow them to stay outside for long as it is seen as wasting children's time.

In order to extend vocabulary teachers can label and put signs on interest tables and also displays so that children become used to seeing the written word. All pre-unit teachers were aware of it because there were many displays on the walls. There were only few labels observed outside classes. Teachers were telling stories and asking questions to test their understanding. In all the eight pre-schools, children were really attentive and seemed happier during story time. Some teachers used songs in between stories to involve children. Items in classrooms were used to test children's visual discrimination such as colours of bags, uniforms and items that were coloured different by the teachers.

Teachers who involved children in activities as they taught reading spent more time as children had to interact with materials.

Instructional materials are useful in the learning of children as they make children active participants in their learning. They also create interest and sustain it. All the respondents were aware of the importance of instructional materials as their response in the question whether they are useful was 100% yes. The teachers in the sampled schools listed various reasons as to why they use these materials. Some of these are: they make children understand easily, create interest and help children to remember for long what they learn because they are actively involved.

From the responses on the types of instructional materials used, the researcher observed that pre-unit teachers mostly use visual aids. This is because they all listed flash cards, blackboard, wall charts, bottle tops and books. The researcher concluded that the reason for use of such materials was because they were easily available. The researcher proved this as when 50 % of the respondent stated that parents are the providers of the materials. Other materials observed were improvised by teachers using locally available materials. For example letters, syllables, words and sentences were sewn or sacks.

Real items were also used to help children in discriminating colours. These ranged from colours of blackboard, uniforms, bags and walls. This showed teacher's ability to make learning meaningful to learners as they used objects in their environment. Three pre-schools were observed using plasticine to model letters and animals.

Learning environment consist of human resources and other resources in the school like buildings, instructional materials and play equipment and materials. The pre-unit teachers understood this as observed in their response to describe an ideal learning environment. 87.5% stated that it's an environmental where teachers are friendly, 75% indicated having appropriate and enough furniture, 85.5% indicated having spacious classrooms, all teachers, that is 100% indicated having enough instructional materials and 50% of all the respondents said having enough play equipment and materials.

In pre-schools, teachers act as surrogate mothers. They are the ones who spend a lot of time with them and provide emotional support. They also take care of them apart from facilitating their learning. Thus teachers need to be friendly to them so that they can grow being emotionally stable and believing in themselves. Children should be free to express themselves.   What the researcher observed was that teachers with long experience were more tolerant to children even when they interrupted them as they taught to report what others were doing. They were able to curb cases of indiscipline easily and continue teaching without seeming to be irritated. When children were eating it was evident how teachers cared for their healthy growth as they persuaded children who were refusing to eat to continue eating.

The researcher found out that all respondents were aware of the importance of instructional materials. The conclusion was that even those who were not using them was because they either lacked them or due to lack of motivation they did not want to bother themselves to improvise, or maybe they were just lazy. In pre-schools where teachers

used instructional materials often and children freely interacted with them, the mastery of reading skills was high. This can clearly prove then that instructional materials help to commit what children have learnt to long term memory thus making it possible for them to remember what they have learnt.

Instructional materials also help children to make use of more than one sense as they see, touch and sometimes taste and smell. They also help children to develop their fine muscles as they trace, model or draw. Important skills are also learnt like sharing, co-operating, leadership, self control among others.

Children spend most of their time in classrooms. Therefore, they should be well constructed with doors and windows, be spacious and well ventilated. Some classes were not well ventilated as observed by the researcher. There is a healthy risk as children can get sick easily due to dampness or if a child has a contagious disease it can easily spread to others. Spacious classrooms were observed to allow free movement of children without disturbing others. In such classes teachers also had an easy time dealing with individual needs of children. These small classes can not be used for indoor games during rainy season. Teachers can also reach all children easily but where the classrooms were not spacious, it was noted that children had difficulty using instructional materials as they were very close to each other and kept snatching from each other. The teachers were also unable to deal with individual children especially where they sat on benches. This prevented teachers from attending to children individually according to their needs. Negative behaviours were also noted like pinching each other or even playing games as

the teacher was in front. In the small classes, learning corners were not based on activity area or themes. Different things were piled in one corner. However, it was noted that some classes were spacious but they did not even have these learning corners. The researcher then concluded that the teachers' initiative contributed to the presence or absence of learning corners.

Furniture found in the pre-schools was: chairs, cupboards, tables and benches. In places where chairs were available they were of the correct height and the tables used with them were smaller in size as they were shared by four children. These offered easy movement for children as they moved from their sitting positions to perform an activity without bothering others. Teachers on the other hand were able to reach every child who needed individual attention. The long tables and benches restricted both teachers and children's movement. Worse still the benches did not have a place to support children's back and this could affect the children negatively in terms of their posture. Where cupboards were available materials like books, both textbooks and exercise books were kept there. But some were too high for children and they had to depend on the teachers to issue the materials.

Water is an essential commodity as it is used in various activities like cooking, cleaning classrooms and latrines or toilets, washing hands and in learning activities such as floating and sinking. The researcher noted that all pre-schools had water from various sources like tap (piped water) or stored and piped water. However, some had only piped water and this poses a problem as sometimes there might be a problem with the tap or

pipes meaning that children would eat without washing hands which could lead to healthy problems.

Schools should have adequate latrines/toilets. The researcher found out that in most pre-schools, children shared toilets with children in primary school. In others, though they had their own latrines/toilets they were not enough for the number of children in those schools as per the Education Ministry's recommendation.

Play is an integral part of children as it is important for their growth in all aspects. It also makes them active and helps brain to develop by stimulating it. It is therefore important that pre-schools should have playgrounds that are spacious with adequate play equipment and materials.

Two of the public schools had spacious playgrounds with no major equipment. Children were using balls and ropes that they had improvised. The other public school had a small playground but better equipped as it had swings, ladders, slides, tyres, balls and ropes. All the private schools had a small playground and few play equipment and materials. Almost all teachers did not seem to place a lot of importance to play as there was no structured play. Children were only set to play during break time. Only in one public school was the teacher observed incorporating reading with play. For example, children jumped when an animal was mentioned starting with a particular letter. Anyone who jumped when the animal mentioned had a different letter was put aside. The children

enjoyed every minute of the lesson and were very keen to hear what the teacher would say.

From the facilities observed the researcher noted that some did not have an effect on the mastery of reading comprehension skills. For example some schools had a very small playground yet they had scored higher marks than those with large playgrounds. However, the more facilities there were in school, and were adequate the higher the scores in reading skills.

5.3 **Conclusion**

All the teachers in pre-schools studied are aware of the importance of instructional materials. The pre-school parents are the main financiers of pre-school education through the fees they pay and also providing materials like books, and pencils. This affected the kind of resources that were in the schools as they had to be built or bought using money contributed. Schools in areas where parents had low income had fewer facilities leading to low mastery of reading skills. In the same schools, some children were taken to pre schools in their sixth year so that parents could spend less money before taking those children to primary schools where education is free.

Public pre-schools attached to public primary schools were mostly affected. The pre-schools had very few and ill maintained facilities whereas the primary schools had more facilities. For example in some schools, taps were near the primary classes and the pre-school children had to go to those areas. When both pre-school children and primary

school children were outside, it was the pre-school children who had to wait until the others had used the facility before they had a chance to use them. Absenteeism was a problem to both public and private pre-schools with children from parents with low income as they had to be sent home to get school fees. This affected the mastery of reading skills.

All pre-school teachers were professionally qualified as the researcher discovered. They therefore had acquired the necessary skills to impart skills, knowledge and knew how to handle children. Low scores in the mastery of reading skills was not due to qualification but other factors like facilities in pre-schools, availability of instructional materials and their subsequent use. The researcher also found out that experience plays a great role in improving handling of children and mastery of reading skills. Also noted to have an effect was teacher's motivation as where there were more resources and facilities were well constructed, mastery of reading skills was high as it can be assumed that the teachers were better paid. Where teachers used instructional materials often and allowed children to interact with them, the mastery of reading skills was high.

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5.4 **Recommendations**

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There is need for the pre school education to be incorporated in the Free Primary Education (FPE) programme so that government can supply pre schools with funds to buy instructional materials and build facilities. This will ensure there is appropriate and adequate facilities in schools making children learn in an environment that is conducive. It will also curb absenteeism as children would not be sent to get school fees. Also importantly, parents will be taking children to pre-schools at the right age and not waiting until the last year before they join primary school.

ECD teachers should be employed by the government so that highly trained and experienced teachers are not only found in pre-schools with children from parents with high incomes. This will also motivate teachers in all pre schools as they carry out their duties.

In-service courses for pre-school teachers should be held regularly to remind them correct teaching methods and giving them a chance to share experiences with teachers from neighboring schools. There should be more and vigorous community campaigns so that people are made aware of the importance of early childhood education. More time should be allocated to the teaching of reading so that teachers can use more practical approach when teaching. This will also make them include play in the teaching of reading.

Suggestions for further study

This study was on the effects of running environment on reading comprehension in Kikuyu Division, Kiambu County. Thus other studies should be done to find out the specific facility that affects reading comprehension.

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APPENDIX 1

TEACHERS' QUESTIONNAIRE

Dear Participant,

You have been chosen to participate in this study. Below are some questions which you are required to answer. Your honesty will be highly appreciated. All information given will be treated with confidentiality.

Please indicate the correct option by ticking [√] or giving a brief answer

Indicate the category of your school:

Private [   ]   Public [   ]

Number of children _____

Section A

1) Which is your age group?

   A Below 25 years [   ]   B. 26 – 35 years [   ]

   C. 36-45 Years [   ]   D. above 45 years [   ]

2) How many years have you taught this age group?

   a)1-5 years. [   ]   C. 10 and above [   ]

   b)5-10years. [   ]

3) What is your academic qualification?

   a) K.C.S.E./K.C.S ☐   C. Others (Specify) _____

   b) K.C.P.E./C.P.E ☐

4) What is your professional qualification?

   a) Diploma ☐

   b) Certificate ☐

   c) Other (specify) _____

5) How do you teach reading comprehension?

_____

_____

6) How do you test children to find out if their reading skills have developed?

   a) Written test ☐

   b) Oral test.   ☐

   c) Other ways (Specify) _____

7) Name the other languages that you teach apart from English?

_____

8) How do these languages affect the teaching of reading comprehension in English?

_____

_____

9) What other problems do you encounter when teaching English reading comprehension?

_____

_____

10) Which English text books do you use to teach reading?

_____

_____

11) How long do you teach reading per day?

    a) 30 minutes

    b) Between 30 min -50minutes

    c) Over an hour

12) Do you consider this time sufficient or not sufficient?

_____

_____

13) According to you, how much time should reading comprehension be allocated?

_____

_____

SECTION B:

Learning Environment

1) Do you think instructional materials have any effect on reading comprehension?

    a) Yes

b) No

c) Explain your choice of answer _____

_____

_____

2) Name the instructional materials that you use to teach reading

_____

_____

3) Explain briefly how you use instructional materials in your class to enhance
reading comprehension. _____

_____

4) How useful are instructional materials in facilitating teaching and reading
comprehension to:

a) Learner

_____

_____

b) Teacher

_____

_____

5) Name physical facilities in your school that facilitates reading _____

_____

6) List play equipment and materials that children use to facilitate reading comprehension_____

_____

7) Who provides materials like books, pencil, crayons and rubbers in your school?

   a) Parents [ ]   b) School [ ]

   b) Others (specify) _____

8) Describe an ideal learning environment according to you _____

_____

9) Can you suggest what should be done in the learning environment to improve teaching and learning of reading comprehension _____

_____

Thank you for your co-operation

Observation checklist

School's category

Private [ ]   Public [ ]

Number of children _____

Below is information on resources in the pre-schools as observed by researcher

Resources									
Language centres									
Library									
Classrooms									
Latrines									
Store									
Cupboards									
Staffrooms									
Playground									
Swings									
Tyres									
Ropes									
Balls									
Climbing lanes									
Ladders									
Kitchen									

1) Does the teacher use instructional materials to facilitate reading comprehension?

    Yes ☐   No ☐

2) How are the instructional materials in relations to the Number of children?

    Adequate ☐   Inadequate ☐

3) How many reference books does the teacher use to enhance reading comprehension?

    a) One ☐   b) Two ☐   c) more than two ☐

4) How often does the teacher use learning centres to enhance reading comprehension?

a) All the time ☐

b) Sometimes ☐

c) Not at all ☐

5) Does the teacher deal with individual children in the cause of teaching reading comprehension?

a) Yes ☐

b) Sometimes ☐

c) No ☐

Section B

Below are reading readiness skills and children's mastery of reading skills as a group

Skills	Very good	Good	Fair	Bad
Sort, group and match objects				
Recognize colour				
Identity shapes				
Recognize letters				
Ability to sound letters				
Ability to read syllables				
Read from left to right and right to left				
Ability to recall objects				
Ability to interpret and describe details in pictures.				
Able to observe and describe objects				
Can interpret questions and follow instructions given				
Complete letter, picture and word puzzles				
Arrange pictures of a story in sequence				
Reading 3 to four letters words				
Read sentences				