

**THE INFLUENCE OF TEACHER CHARACTERISTICS ON MOTIVATION OF  
PRE- SCHOOL CHILDREN IN LEARNING SCIENCE ACTIVITY IN  
MARIMANTI ZONE, THARAKA - SOUTH DISTRICT**

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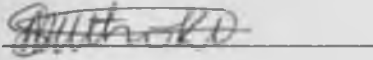
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THE REQUIREMENT FOR THE DEGREE OF MASTERS OF EDUCATION IN  
EARLY CHILDHOOD EDUCATION  
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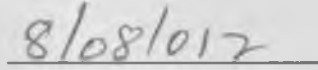
**2012**

## DECLARATION

This research project is my original work and has not been presented for a degree in any other university.

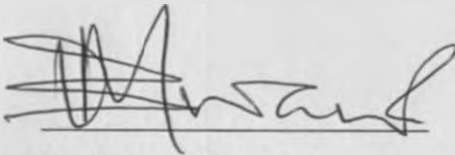


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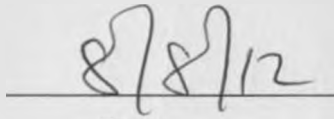
**Date**

This research project has been presented for examination with my approval as a university supervisor.



**Dr. Samwel Mwanda**

**LECTURER**



**Date**

## **DEDICATION**

I dedicate this research project to my lovely husband Julius Mutugi and my children

Faith Gatumi, Peter Mutuma and Joseph Muthomi.

## **ACKNOWLEDGEMENTS**

I am deeply indebted to my family and classmates for the moral and intellectual support they offered me in one way or the other throughout my study period. Without their support, encouragement and value for education, I would not have succeeded in my research study.

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## ABSTRACT

The purpose of this study was to find out the influence of teachers characteristics on motivation of pre-school children in leaning science activities in Marimanti Zone Tharaka South District. Teacher characteristics like academic, Professional qualification, age and experience do have an influence on how a teacher is able to motivate the pre-school children in science activities. This study adopted a survey design. This design was suitable for this study because variables such as age, academic qualification, professional qualification and experience of the teachers were not be manipulated. The target population for this study included 14 public and 2 private primary schools with pre-school classes. The 16 pre-schools formed the part of target population .To ensure validity of the instrument the researcher piloted the instruments in one public and one private school that were not based in the main study. The researcher administered the instruments to teachers and pupils of each pre-school at a time. The data was analyzed using frequency, counts and tables. The findings of the study will help the policy makers to determine methods of effective teaching that motivates pre-school children to learn science activities. The researcher reviewed the existing literature on the subject matter of the study. The section relates past studies on influence of teacher characteristics on motivation of pre-school. The results of the study revealed that pre-primary teaching is dominated by Secondary school leavers who have little or no training. Teachers are not employed by the TSC like their primary school counterparts meaning that they regard the job as temporary and can quit with availability of an opportunity .Teachers without teaching facilities were 50% , A few used text books (20%), teaching charts (10%) and rulers (5%) while remaining (15%) used other facilities. Pre-primary teachers in Tharaka South District are dominated by women who make up to 80% of the teaching force. The main methods used by pre-primary teachers in teaching science were writing on the black board and showing the pupils practically/conducting demonstrations. The researcher recommends that there is need of the government to provide adequate facilities and resources to run all the pre-primary classes instead of leaving the burden to parents

## CHAPTER ONE : INTRODUCTION

### 1.1 Background to the study

Around the world there are many similarities and differences among teachers in the way teachers are trained and certified as professionals to teach in a pre-school. In almost all countries teachers are educated in a university or college. Government may require certification by a recognized body before they can teach in a school.(Baker ,1999)

An experienced teacher has skills to motivate the learners to be curious, aroused and interested during science activities lesson

In America, Dweck (1999) hypothesized that praise directed towards the child's efforts or problem solving process would be beneficial to pre-school pupils to learn science activities.

The arousal, regulation and sustaining of the pupil's enthusiasm for learning that is the utilization of his power of motivation during the pre-school science activities lesson constitute an important task for the teacher. The classroom climate influenced by the teacher has a major impact on pupils' motivation and attitude towards learning, that is to say, for teachers, having been equipped with pedagogical and professional characteristics would not be enough to establish a positive, learnable, and teachable classroom climate. Specifically, the factors that best facilitate children learning are considered to be the ones that are described as being purposeful, task-oriented, relaxed, warm, supportive, and has a sense of order and humor in an integrated sense Kumaravadivelu (1992)

According to Nasibi, (2005), argued that the content can be taught attractively by use of fun, using teaching resources varies atmosphere from serious to light hearted atmosphere which permits a sense of harmony and full of themes that are natural and living world.

This helps the learner to be curious to explore the environment around them and understand the surroundings. The teacher can also use stimulus variation which develop and maintain a high level of attention on the part of the learners during the course of the lesson like mannerisms, voice and materials used during the instruction. This caters for short attention span by the children. The teacher can support the learner's efforts by using reinforced techniques. This can be done through verbal rewards given as praise, use of learner's names, humour, encouraging weak cases and concrete rewards (Nasibi, 2005).

The goal of the teacher is to help and encourage the children allowing them to develop confidence and inner discipline that leads to development of scientific skills like manipulative and observation and interest in science activities (Schwartz 1996)

According to Mungari (2006), there are several science activities, they include; noticing a Phenomenon, Casual Manipulation of Empirical Variables, Specification of Functional Relationships, Specification of Coherent Explanatory System and Application of a General and Integrated Mechanism of Prediction).

According to K.I.E (2008), science can be taught in preschools to meet various objectives such as, Observation which is one of the most important skills for preschooler. Because preschoolers develop innate curiosity by providing many different materials to touch, observe and manipulate, the children learns the basics of scientific observation. The other objective is Classification. Classifying items means grouping them based on similarities. For example, gathering several pictures of animals as well as several pictures of household items, trees or toys. As a large group activity, tell the children that they will classify the pictures according to one set of rules

The other objective is communication wwhen scientists share their work with the world, everyone benefits. This is important in preschool classroom, too. When children are

observing objects in the science center, provide them with paper and crayons to draw what they see under the microscope. Or write a word or two about what happens when they use the magnifying lens to see a leaf. Explain that they all may notice, or observe, different things when working in the science center

The other objective is experimentation; Preschoolers use their experimentation skills every day in the classroom. Explain that when they perform scientific experiments, they will be answering the question, "What if..." Giving children a chance to observe classify and communicate before diving into the experimentation phase will give them a strong head start to learning science.

Science can be taught in various ways or methods which the teacher can vary when teaching science activities to motivate the learners. Brunner (1965), argued that discovery method is also known to keep the learner's motivated and aroused because it helps the learners to apply different skills during science activities that make them to be motivated.

According to Farrant (1997) there are other methods of teaching science activities like instructional methods which makes that learner to be motivated to follow instruction up to the end to get the results. The other method of teaching is the experimental method where learners enjoy manipulating materials and out of this method they learn many things as they satisfy their curiosity. In relation to teaching methods teachers should vary methods of teaching to motivate pre-school pupils during science activities. This helps to generate curiosity of the pupils

According to Greenwald (1999), teacher characteristics like academic and professional qualification do have an influence on how a teacher is able to motivate the preschool children in achieving the expected interest, completion of science activities, neatness of the class work and participation during science activity. A motivated child behavior is

expected to be explicit in the ability of the child to have positive interest in science activity, complete class work and active participation during science activity in class. In reference to records found in District Education office in Tharaka South District, performance of science subject in KCPE has been below average in the last five years from 2006-2011 in Marimanti Zone.

Since Early Childhood Education (ECD) lays the foundation of the science art early ages, the researcher intends to investigate the relationship between teacher characteristics that includes, age, experience, academic qualification, professional qualification on motivation for pre-school pupils in science activities in Marimanti Zone Tharaka south District.

### **1.2 Statement of the problem**

The teacher's characteristics that include academic qualification, professional qualification, age and experience plays significant role in achieving a scientific skills knowledge and attitude towards the science activities in pre-school.

According to Nasibi (2005) a teacher can motivate the learners by creating a conducive environment, varying ways of motivation like rewards and praises to reinforce a behavior and also use of different methods. It is important to motivate the children because motivation inculcates interest and enjoyment in the learning process of science activities. Children are most absorbed when they are most interested in their learning activities. By use of personal characteristics, a teacher can act as a moral leader seeking to provide intimate classroom atmosphere permeated with a sense of harmony and leaving worlds (Schwartz 1996).

This study intended to find out the influence of teacher's age, experience, professional and academic qualification on motivation of pre-school children in learning science activities in Marmanti Zone Tharaka South District.

### **1.3 Purpose of the Study**

The purpose of this study was to find out the influence of teachers characteristics on motivation of pre-school children in leaning science activities in Marimanti Zone Tharaka South District.

### **1.4 Research Objectives**

This research was guided by the following objectives

1. To establish the relationship between the age of the teacher and motivation of pre-school pupils in science activities.
2. To determine the relationship between the professional qualification of the teacher and level of motivation of pre-school children in science activities.
3. To determine the impact of teacher's experience on the level of motivation of pre-school children in science activities.
4. To find out the relationship between academic qualification and motivation of Pre-school children in science activities.

### **1.5 Research questions**

1. What was the relationship between the age of the teacher and motivation of pre-school children in science activities?
2. What was the relationship between the professional qualification of the teacher and the level of motivation of pre-school children in science activities?
3. What was the impact of teacher's experience on the level of motivation of pre-school children in science activities?
4. What was the relationship between the academic qualification of the teacher and the level of motivation of pre-school children in science activities?

### **1.6 Significance of the study.**

The research findings might benefit the Policy makers by equipping them with knowledge of pre-school teachers training, minimum qualifications to qualify for training and how to modify the curriculum to suit pupils in pre-school. The findings of the study will help the policy makers to determine methods of effective teaching that motivates pre-school children to learn science activities. The finding of the study will equip the pre-school teachers with knowledge and skills on how to motivate pre-school children. Pupils will benefit from the acquired skills on motivation from teachers.

### **1.7 Limitations of the Study**

The researcher concentrated on the selected public and private schools which offers pre-school education in Marimanti zone Tharaka south district.

Some teachers in those pre-schools gave erroneous information because they did not have knowledge on Early Childhood Education (ECE). Other teachers failed to answer questions in the study in fear of the study findings being used in the evaluation.

### **1.8 Delimitations of the Study**

The study was carried out in all public and private pre-schools in Marimanti Zone Tharaka South District. The researcher personally administered the questionnaires to 12 teachers and 1 observational checklist per class to find out levels of motivation of pre-school children in science activities.

### **1.9 Basic Assumptions of the study**

Teachers in pre- schools motivated their pupils when learning science activities.

All the pre-schools had the necessary facilities to enhance learning of science activities.

All teachers in Marimanti Zone were academically and professionally qualified in teaching science activities.



### **1.10 Definition of Terms**

**Motivation** – Refers to the internal state that arouses direct and maintains behavior.

**Pre-school** – refers to pre-primary classes and lower primary classes that include standard one, two and three.

**Characteristics** – A distinguishing trait or feature of a person.

**Age** -The length of time that a person has lived.

**Professional** - Expert and specialized knowledge in field which one is practicing.

**Experience** -Knowledge of or skill of some thing or some event gained through involvement in or exposure to that thing or event.

**Academic** -This relates to studies that are liberal or classical.

**Preschool children** – refers to young ones of age 3-9 years

**Teacher** –refers to a Pupils instructor.

**Pupil** – refers to a Learner

## **1.11 Acronyms**

**ECE-Early Childhood Education**

**MOE- Ministry of Education**

**NACECE-National Centre for Early Childhood Education**

**PTO-Parents Teacher Organization**

**KCPE-Kenya Certificate of Primary Education**

**KCE-Kenya Certificate of Education**

**KCSE-Kenya Certificate of Secondary Educations**

**KNEC-Kenya National Examination Council**

**KJSE-Kenya Junior Secondary Education**

## CHAPTER TWO: LITERATURE REVIEW

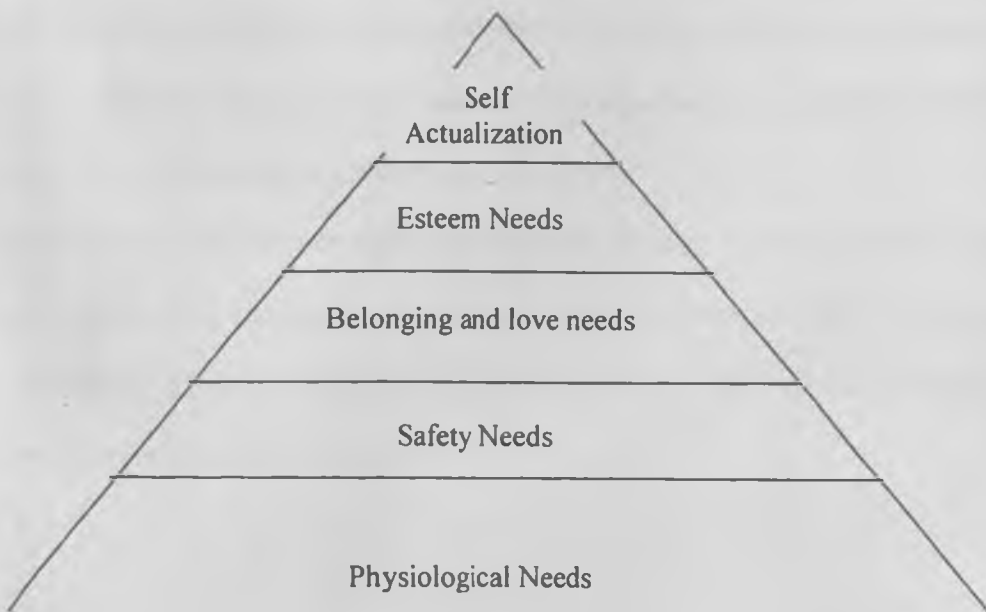
### 2.1 Introduction

This section reviews the existing literature on the subject matter of the study. The section relates past studies on influence of teacher characteristics on motivation of pre-school children in learning science activity. It also narrates research work carried and gives a critical review of these existing literatures.

### 2.2 Maslow's theory.

According to Maslow's theory, human beings are motivated by primary needs such as hunger, thirst and avoidance of pain. Human beings are also motivated in secondary need for instance money, good grades and self-esteem. These needs differ from one culture to another and from one environment to another. Maslow proposed that all motives can be arranged in a hierarchy from lowest to the highest motives as shown below.

**Maslow's theory of Needs**



According to Maslow's, higher motives should only appear after the lower ones have been satisfied. The satisfaction of higher motives depends on satisfactions of lower ones. In relation to the Maslow's, theory a teacher should create higher motivation to the children to enable them achieve set goals. According to Margaret Kaburu (2009, Punitive and harsh teachers reduced children's motivation in a learning environment.

### **2.2.1 The relationship between motivation theory and teacher characteristics.**

According to Maslow's theory, teachers need to ensure that they meet children's holistic needs. Starting with the lower needs moving upwards. As explained below.

#### **Physiological needs**

Trained teachers should be aware that pre-school pupils need adequate and balanced diet. Children who are hungry lack adequate energy to participate during the lesson, spend most of time thinking about their hunger instead of concentrating on the learning, do not interact affectively with their environment, and therefore lack motivation to learn Science activities. Clean and safe water for drinking should be provided to children to protect them from contracting water-borne diseases.

Sick child does not have energy and motivation to learn science activities. Teachers should ensure that the pupils are clean and neat to enhance their self-esteem and confidence to participate during science activities. Torn and dirty clothes low self-esteem which interferes with their learning.

### **Psychological needs.**

It is expected that an experienced teacher should be able to provide for psychological needs of the child in an attempt to motivate the learner in learning science activities.

The teachers of preschool should be able to develop good teacher- child relationships.

Children need to feel that their teachers love them as individuals and are genuinely concerned about them. Teachers should ensure that the environment is secure for children and there is no bullying. Discipline should be child-friendly and teachers should avoid caning, abusing and sending them home for minor offences. Children will learn better in a school where they feel safe and secure. Children need to be loved and accepted regardless of their participation during science activity lesson and family backgrounds. Teachers should use child-centered methods and explain concepts in a friendly manner. To enhance self-esteem of the children teachers should always encourage, praise, reward and acknowledge the efforts of the children. Each child should be made to feel that she/he is capable of achieving success in life. Teachers should understand the different talents children have in order to motivate each child in the area she/he is talented in. Children need to realize their full potential and it should be done by the teacher through rewarding and praising from when they are young so that they learn to enjoy the feelings of happiness that follow success.

This creates internal motivation which is important for self-actualization. Teachers should help children to form study groups where each group should have children with deferent individual's talents for them to learn from each other. This theory clearly indicates that children are motivated by unsatisfied needs that range from physiological to psychological needs. However the theory does not give any relationship between teacher

characteristics like experience, professional and academic qualification and levels of motivation of pre-school children in science activities. Thus need for this study.

### **2.3 Relationship between characteristics of a Teacher and motivational influence.**

In Ghana McLaughlin (2003) argued that when creating a high quality instructional environment is a shared goal, parents transform from passive supporters to active members of the educational community. When children see the support, excitement about learning and teamwork between home and school, they too become excited. They sense the value in learning and their motivation for learning grows.

Kelly (1979) supports the idea of environment being stimulated for the children to perform in science activities. This can be done by the teacher being supportive, warm which encourages them to explore, to be curious and self-reliance during science activities. McLoughin and Kelly concentrated on environmental influence on children motivation in science activities. This study intends to concentrate on teacher characteristics and their influence on motivation of pre-school children in learning science activities.

According to NACECE (2002) the training that teacher undergoes help them to know how to make teaching resources that are stimulative when teaching science activities to pre-school children. They are also taught effective methodology to be used during science activities. Teachers are given necessary skills during training to enable them to motivate their pupils towards science activities. The individual characteristics of the teacher are important aspect of how much an impact they may have on their children. McCormack (1986) noted that the teachers who have personal involvement with the subject matter and skill in teaching it, influence children enthusiasm for learning because

they are able to be enthusiastic about what they are teaching and the children inevitably exude that enthusiasm. Muller (1999) noted that teacher characteristics are seen by children as motivating and encouraging. Teachers who set high standards and have high expectations for their children are likely to elicit motivation to do well in the pre-school children during science activities. If they child senses that a teacher believes that they can accomplish certain goals in a classroom, they tend to belief that they can also make and they are motivated to do the science activities to achieve the set goals. Teachers must be on guard against allowing stereotypes and judgments to influence their expectations. Teachers can develop their expectations for individual characteristics such as race, behavior and academic work such as homework completion. (Pigatt 2000).

According to Muller (1999) report state that the favorite teachers possess the following characteristics: a good sense of humor, a pedagogical approach that is fun yet educational, the ability to motivate all children to work hard, fairness and accessibility, and empathetic regard for children. The most important thing that teachers can relay to their children is the rational ability to judge the importance and future implication of their children personal goals. Through accomplishing science activities, they will be intrinsically motivated to work towards set goals rather than acting simply because of associated incentives and sanctions.

Wentzel (1999) noted that teachers are the main avenues through which socially valued goals and expectations are taught to children. This helps the children to get their point across effectively, to maintain their attention and enthusiasm.

Johnson (1999) suggested that teachers focus on lessons that are interesting and relevant. This study will concentrate on individual teacher characteristics like age, experience academic qualification and professional qualification on their influence on pre-school children motivation in science activities. According to research done by Hollins (1990), it is found that positive teacher – child relationships had an effect on children participation during science activities. Teachers who were responsive to the personal lives of children generated positive feelings in those children which led to increased academic efforts in school.

Carlson (1996) supports the idea of teacher – child relationship in that it sets the school climate for the children to learn by free interaction of pupils/children and teachers especially those teachers who care, comfort and help children to solve school and personal problems which make differences in the school experience of those children. The most salient teacher's characteristic that influences their relationship with their children as well as have profound effect on child motivation is caring and support. If the children perceive that the teachers cares about them and their learning, they will be more willing to “invest” in the teacher and the child – teacher relationship, making it more likely that the teacher will be able to have an impact on and influence the child.

Fenzel (1997) gave examples of how teachers can demonstrate care for children by spending time in activities with children, maintaining personal contact and taking time to counsel them.

Wentzel (1997) supported the notion that “children are more likely to engage in classroom actively and if they feel supported and value by encouraging them to participate during science activities”



Muller (1999) looked in depth at which teacher characteristics are seen by children as motivating and encouraging. Teachers who set high standards and have high expectations for their children are more likely to elicit motivation to do well in those children. Having high expectations for children is important, because they tend to trust adult's ideas and beliefs about them. Therefore, if a child senses that a teacher believes that they can accomplish certain goals in the classroom, it is more likely that the child will also begin to believe that about him or herself.. Rodick(1980) studied the effects of a tutoring program on the academics and motivation of inner-city children and found that the "enthusiasm and high expectations of the tutors undoubtedly evoked similar enthusiasm and motivation among them.

Muller,(1999) found that children feel it is important to have a teacher who is "able to believe that they can do good work and to demand it". Teachers must be on guard against allowing stereotypes and judgments to influence their expectations. Often, teachers develop their expectations for individual children through such child characteristics as race, behavior, and academic work, such as homework completion (Cowen, 2000).

Other teacher characteristics that pigott, (1999) found to be motivating for urban children included: sensing that the teachers' judgments are fair, receiving encouragement and recognition, being fun and worthy of respect. In the same study, children also reported that they would most appreciate teachers who were understanding and empathic about their lives. The authors reported that "favorite teachers possess the following characteristics: a good sense of humor, a pedagogical approach that is fun yet educational, the ability to motivate all children to work hard, fairness and accessibility,

and empathetic regard for children. The most important thing that teachers can relay to their children, according to Robenstine (1997) is the rational ability to judge the importance and future implications of their own personal goals. Through accomplishing this, children will be able to see for themselves how important achieving certain goals are, and will hopefully become intrinsically motivated to work toward those goals, rather than acting “simply because of associated incentives and sanctions” . Wentzel (1999) noted that teachers are the main avenues through which socially valued goals and expectations are taught to children. Therefore, it is primarily in the classroom that these children learn socially acceptable norms. In order to get their point across effectively and to maintain children’ attention and enthusiasm, Johnson (1997) suggested that teachers “focus on lessons that are interesting and relevant”.

This study will concentrate on individual teacher characteristics like age, experience gender and professional qualification on their influence on preschool children motivation in science activities. The positive relationship between a teacher and child is “essential if learning is to take place” (Muller, 1999). Spencer (1990) found that African-American children believed that positive teacher-child relationships had an effect on their academic achievement, and that teachers who were responsive to the personal lives of children generated positive feelings in those children, which led to increased academic effort in school. Carlson (1996) found that positive interactive teacher-children relationships are the most important dimension of school climate for African- American children. Specifically, teachers who cared for, comforted, and helped children with school and personal problems made a difference in the school experience of these children.

The most salient teacher characteristic that influences their relationship with their children as well as has a profound effect on child motivation is caring and support (Fenzel, 1997; If the children perceive that the teacher cares about them and their learning, they will be more willing to “invest” in the teacher and the child-teacher relationship, making it more likely that the teacher will be able to have an impact on and influence the child.

Fenzel (1997) gave examples of how teachers can demonstrate care of children by spending time in activities with children maintaining personal contact and taking time to counsel them. Wentzel(1997) supported the motion that children are more likely to engage in classroom activities if they feel supported and valued.

These authors did not show any relationship between teacher academic qualification and professional qualification and their abilities in classroom science activities while supporting pre-school children during science activities hence the need for this study.

Wentzel (1998) found that “perceived support from teachers was an independent, positive predictor of interest in class” and that “perceived support from teachers was unique in its relations to outcomes most proximal to classroom functioning, interest in class and pursuit of goals to adhere to classroom rules and norms”. Baker (1998) concluded that teacher support is an especially important factor for the African-American children learning science activities’. Having caring and supportive teachers is especially important to urban children. Stressing the importance of caring teachers and a caring school environment for children.

Baker (1998) believed that without such a caring environment, these children would not establish positive affiliations with the school, thereby reducing the likelihood that the school environment could have a positive impact on them and their educational outcomes. These authors did not show any relationship between teacher academic and professional qualification and their abilities in classroom science activities hence the need for this study. Recent research has found a correlation between teacher enthusiasm and children intrinsic motivation to learn in the classroom (Patrick 2000).

In Canada, in most provinces a second bachelor's degree such as bachelor of education is required to become a qualified teacher (Baker, 1999).

In Kenya pre-school teachers are trained in colleges to get atleast a certificate in ECD certificate by Kenya national examination council (KNEC) to enable them acquire professional qualification that enable them to teach pre-school children in science activities (MOE 2000). In Newzealand, Lind (2003) argued that effective pedagogy requires education and care to be integrated with learning, development and experiences for children inter-related. Evidence about effective pedagogy shows the need for teachers/educators to understand children's interests and understanding. Reciprocal interactions with early childhood setting make a key contribution to child learning and well being. Effective pedagogy who are teachers/educators who are involved, responsive and cognitively demanding and who encourage sustained shared thinking where adults and children co-construct an idea or skill. In support of change in pedagogy professional development is aimed at influencing teachers/educators interaction with children which can assist them to become better aware of children's ideas and theories, helping them to

extend children's thinking and promote learning in science activities. This is likely to create positive attitude towards learning hence positively motivating learning to explore their environment when learning science. However the author did not pay attention to the influence of professional qualification on motivation of pre-school children in learning science activities which this study intends to focus on. It was found out in the united state, higher quality program employ teachers who have completed more years of education than do lower quality program. Future PTO, teachers in high – quality settings tend to have more specialized training in Early Childhood education and they are more informed about developmentally appropriate practices and teaching strategies for use with young children (Philips 1989).

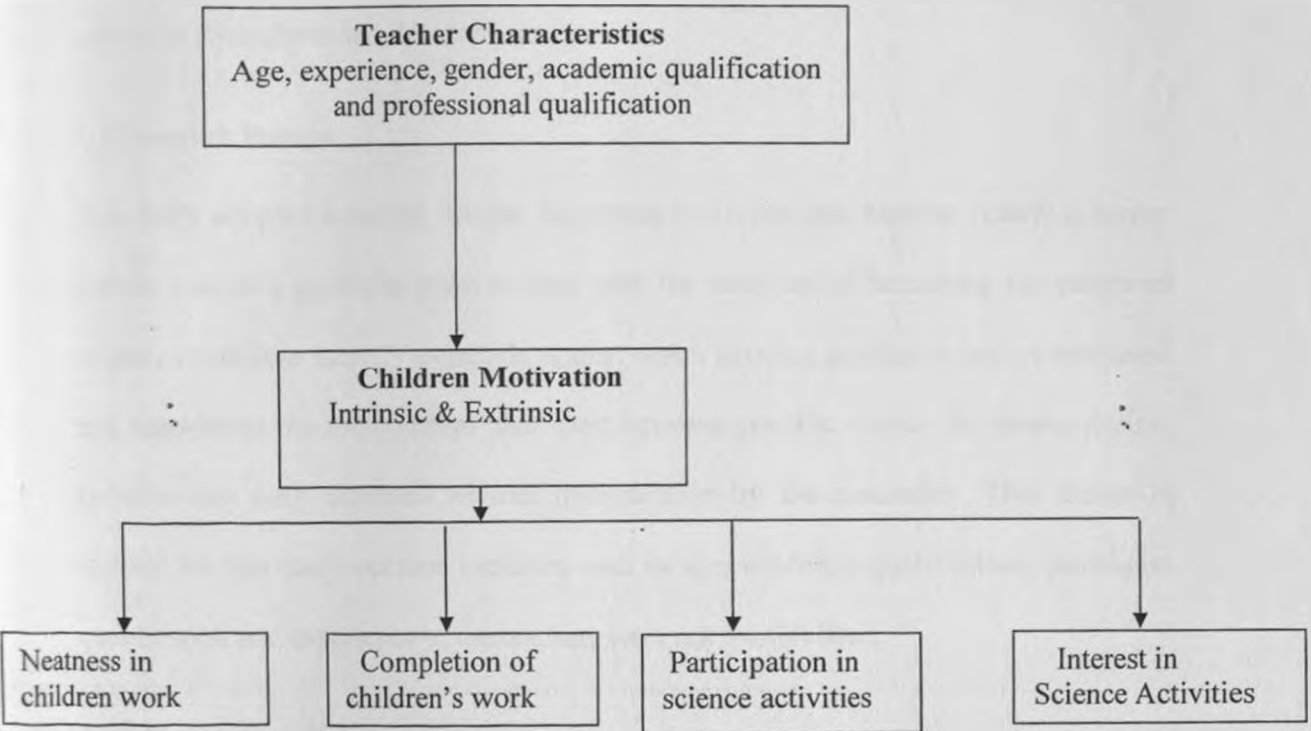
Lind (1995) argued that teachers age as a characteristic can influence child's activities as was found with naturalistic experiences which were initiated spontaneously by children as they go about their daily activities. With naturalistic experiences, the adult's role is to provide an interesting and rich environment for the children. That is adults should offer many things for the child to look at, touch, taste smell and hear. The adult should observe the child's activity, note how it is progressing and then respond with glance, and, a smile or a word of praise to encourage the child. This study intends to investigate the influence of age of teachers on motivation of children in pre-school science activities in relation to science activity completion, neatness, interest and participation which was not done by Lind.

Early childhood teachers exhibit many different levels of educational preparation depending on their role, what type of setting in which they teach, and in which state that they teach within.

## 2.4 CONCEPTUAL FRAMEWORK

This is a diagrammatic presentation of the influence of teacher characteristics on children's motivation in science activities.

Figure 2.4 Conceptual framework



The conceptual framework shows that the teacher characteristics like Age, experience, gender, academic qualification and professional qualification can promote both intrinsic and extrinsic motivation to the children. The personal characteristics of the teachers promote the self esteem of the pupils hence arousing their ego hence intrinsic motivation. On the other hand praises, giving of token and appreciating the good work of the pupils can act as extrinsic motivation. When the pupils have intrinsic and extrinsic motivation they are like to be neat in their work, complete their work/assignment, participate in science activities and develop interest in Science activities

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This section discussed research design, target population, sampling size sampling procedures and research instruments, validity and reliability of instruments, data collection procedures and data analysis.

### **3.2 Research Design**

This study adopted a survey design. According to Cohen and Manion (1989) a survey gathers data at a particular point in time with the intention of describing the nature of existing conditions identify standards against which existing conditions can be compared and determines the relationships that exist between specific events. In survey design, variables are only observed without manipulation by the researcher. This design is suitable for this study because variables such as age, academic qualification, profession qualification and experience of the teachers were not manipulated.

#### **3.2.1 Target Population**

According to Borg and Gall (1989), target population refers to all members of a real set of people, events or objects to which we generalize hypothetical results of the research. The target population for this study included 14 public and 2 private primary schools with pre-school classes. The 16 pre-schools forms the part of target population. There are 14 pre-school teachers and 525 pupils in both public and private pre-schools.

### **3.3 Sample and Sampling procedure**

A sample is a subset of the population to which research intends to generalize the results (Wiersma, 1986). To get the sample size this study used the Krecjie R. (1970) table, see appendix C. According to the table, a population of 16 pre-schools, 14 schools can be sampled to participate in the study. Therefore all the sampled schools participated meaning that 14 pre-school teachers will participate in the study. All the pupils also participated because the researcher used a uniform observation checklist to observe the behaviour of pupils in classes. For the purpose of pilot study, two schools were randomly sampled. The researcher made a list of public pre-schools and private pre-schools separately. Then from every category one school was picked. This was done by writing the names of schools in small papers. The paper were folded and then one school was picked from each category that is, the private and public category

### **3.4 Research instruments**

This study used observational checklist and the questionnaires. The questionnaires were used to collect data from teachers on school they teach according to their age, academic qualification, teaching experience, methods they use to motivate children and methods they use to teach science activities. Questionnaires were preferred in this study because according to Kombo and Tromp (2006) it gathers data of a large sample saves time and assures a respondent confidentiality as well as minimizing biasness. The questionnaires were preferred because it is quick to administer and the researcher will collect the information from many respondents simultaneously. The questionnaire contained closed-ended questions and open ended questions.



Observations schedule were administered to the children by the researcher to collect data on the school they attended, whether they got rewards or not during science activities, whether they completed their work in time and the neatness of their work.

### **3.5 Validity and reliability of the instruments**

This was carried out to ensure there is validity of research instruments. Content validity showed whether the items measure what they were designed to measure. (Mulusa, 1988). To ensure validity of the instrument the researcher piloted the instruments in one public and one private school that were not based in the main study.

Reliable instruments were consistent and stable, hence can be depended upon to yield similar results under similar circumstances (Borg and Gall, 1989). Split-half correction method will be applied. The tested items were splited into two sub-sets; one with even number items and the other with odd numbered items. Scores of each sub-set was computed and correlated using the Pearson's Product Moment correlation ( $r$ ). This is because it is the most often used and the most precise coefficient of correlation (Beat and kahn 1998).

### **3.7 Procedure for Data Collection**

The researcher applied for authorization permit from the ministry of higher education, science and technology to carry out the research. A permit viable got from District Commissioner and District Education officer Tharaka South District.

The researcher administered the instruments to teachers and pupils of each pre-school at a time, where by the teachers were given the questionnaires to answer and the researcher administered the observation checklist to pupils in their classes. After questionnaires were duly filled the researcher collected them for analysis (Njenga and Kabiru 2008).

### **3.8 Data Analysis**

The data collected were analyzed, using frequency counts and percentages to determine the number of teachers in various age brackets in the district. Tables were used to show the number of teacher with various characteristics that includes academic qualifications, professional qualifications and experience. Tables and histograms were used to analyze the types of rewards given to by teachers to pre-school children.

## **CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION**

### **4.0 Introduction**

This chapter presents questionnaire return rate, demographic information of the respondents, data presentation, interpretation and discussion of findings. The presentation was done based on the research questions.

### **4.1 Questionnaire return rate**

Questionnaire return rate is the proportion of the questionnaires that are returned after they were administered in the field. Out of 14 questionnaires given to the ECD teachers all of them were returned making a questionnaire return of 100%

### **4.2 Demographic information of respondents**

This section deals with the demographic information of the respondents who constitute the pre-school teachers and pupils. The demographic information captured data on age, gender, level of education and professional qualification of the respondents

#### **Characteristics of the teacher**

Pre-primary teachers were asked about personal characteristics of gender, and academic and professional qualification. These characteristics are considered key for pre-primary teachers in motivating children and the results are shown in Table 4.1.1 below.

**Table 4.1.1: Characteristics of the pre-primary teacher**

<b>Characteristic</b>	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>		
Male	2	20
Female	12	80
<b>Total</b>	<b>14</b>	<b>100</b>
<b>Academic qualification</b>		
KCPE	2	15
KJSE	0	0
KCSE	10	70
KCE	2	15
<b>Total</b>	<b>14</b>	<b>100</b>
<b>Professional qualification</b>		
None	7	55
ECDE short course	3	25
ECDE 2 year certificate	2	10
EDCE diploma	1	5
Other	1	5
<b>Total</b>	<b>14</b>	<b>100</b>

Table 4.1.1 shows that, majority of pre-primary teachers (80%) were female while the rest were male (20%). This means that in Tharaka South District, pre-primary teaching is the domain of female teachers. Teachers with KCPE academic qualification were 15%

whereas those possessing KCSE were 70% and KCE 15%, an implication that most of the teachers have attained secondary education. However, regarding professional training, 55% of teachers had no training at all. Those who had attended ECDE short courses were 25%, ECDE 2 year certificate were 10% and ECDE diploma only 5% while those who had other professional qualifications were 5%. These results show that pre-primary teaching is dominated by primary school leavers who have little or no training.

Teachers were also asked about their age and the number of years they have been in teaching profession. These variables are also considered key for pre-primary teachers in motivating children. Descriptive statistics on age of the teacher are summarized in Table 4.1.2

**Table 4.1.2: Descriptive statistics summarizing age of the teacher**

Category	Mean	Minimum	Maximum
Age of the teacher in years	21	18	26
Length of service	4	1	9

As table 4.1.2 shows, the average age of the teacher is 21 years. However, the minimum and maximum ages were 18 and 26 respectively. The average number of years pre-primary teachers have been in teaching profession was found to be 4 years, which means teachers teaching in pre-primary level were fairly new in their jobs. For a long time in Kenya, hiring teachers and providing teaching materials at the pre-primary level has been the work of parents. Thus, teachers are not employed by the TSC like their primary school counterparts meaning that they regard the job as temporary and can quit with availability of an opportunity.

**4.3 Relationship between teacher’s age and motivation of pre-school children in science activities.**

The researcher wanted to find out the relationship between teacher’s age and motivation of pre-school children in science activities. Teacher’s age was classified into four intervals as found from teacher’s responses and motivation was classified into four levels as indicated by the observational checklist on table 4.1.4

**Table 4.1.3 Motivation indictors**

No. of classes	Age	Motivation Indicators		
		Neatness	Work completion	Pupils participation
5	18 – 20	2	3	2
3	21 – 22	2	2	2
4	23 - 24	3	4	3
2	25 -26	1	1	1

From the researcher’s observation, pre-school children motivation was observed through the following indicators: - Neatness, work completion and class participation. The researcher tabulated the teacher’s age blanket against the motivation indicators and found the results on table 4.1.4. From the data analysis the researcher found out that old teachers of blanket 24 – 26 were able to motivate their pre-school pupils to high levels compared with young teachers of age blanket 18 – 23 who were not able to motivate their pre-school pupils as children reflected very low motivation during science activities.

**Table 4.1.4 levels of motivation in relation to teacher's age**

No. of classes	Age	Very Low	Low	High	Very High
5	18 - 20	02	03	0	0
3	21 - 22	01	02	0	0
4	23 - 24	0	01	03	0
2	25 - 26	0	0	0	02

According to the respondents the researcher classified teachers between ages 18 – 23 as young and between 24 – 26 as old.

**Figure 4.1.4 levels of motivation in relation to teacher's age**

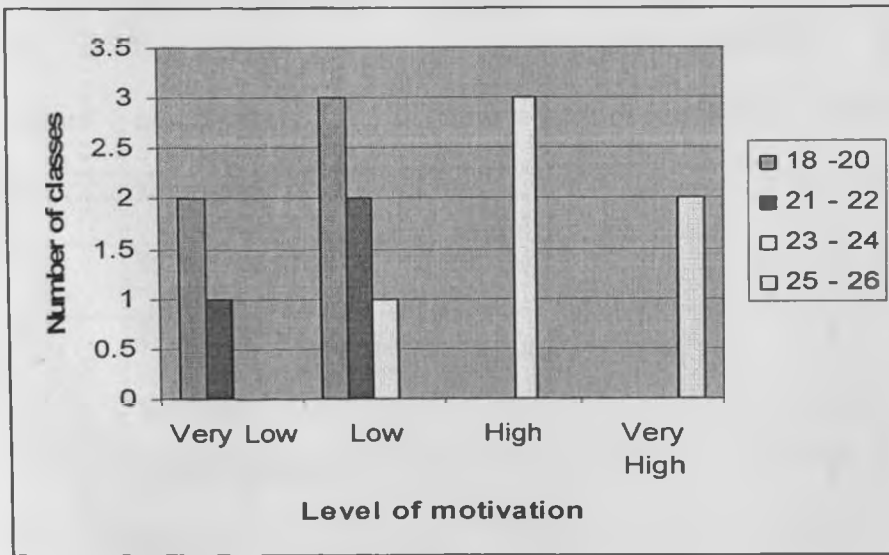


Figure 4.1.4 shows various levels of pre-school pupil's motivation in relation to various age intervals of pre-school teachers where teachers in blankets age (23-26) shows very high levels of motivation while those in age blankets of (18-22) shows low levels of motivation to pre-school pupils. This is in agreement with Muller (1999), who found out

that teacher characteristics are seen by children as motivation and encouraging when involved in science activities leading to neat work, participation and completion. Lind (1995) concurred with the same argument that teacher's age as a characteristic can influence child's activities.

#### 4.4 Relationship between professional qualification and motivation of pre-school children in science activities.

The researcher also was interested in finding out the relationship between professional qualification of a teachers and motivation of pre-school children. From the teachers responses the researcher classified teachers into four levels of professional qualification while pre-school levels of motivation was related using three motivation indicators that included neatness, work completion and class participation as indicated on table 4.1.5.

**Table 4.1.5 professional qualification and motivation**

No. of classes	Professional qualification	Motivation Indicators		
		Neatness	Work completion	Pupils participation
3	No Qualification	1	0	0
4	ECDE short course	2	1	1
5	ECDE 2years certificate	3	3	4
2	ECDE Diploma	2	2	2
0	Others	0	0	0

Motivation indicators from table 4.1.5 reflected various levels of motivation of pre-school children depending on professional qualification of teachers. The levels of motivation are summarized on table 4.1.6



**Table 4.1.6 levels of motivation in relation to teacher's professional qualification**

No. of classes	Professional qualification	Levels of Motivation			
		Very low	Low	High	Very high
3	No Qualification	1	2	0	0
4	ECDE short course	0	4	0	0
5	ECDE 2years certificate	0	0	2	3
2	ECDE Diploma	0	0	0	2

The researcher found that 100% of the pre-school classes handled by diploma teachers were highly motivated. It was also observed that classes taught by teachers who had undergone short course training in ECD had their pupils 100% motivated.

Teachers who had gone for 2 years course had 60% of their pupils very highly motivated. Teachers with no qualification had 33% of their pupil's very lowly motivated and 67% lowly motivated.

**Figure 4.1.6 levels of motivation in relation to teacher's professional qualification**

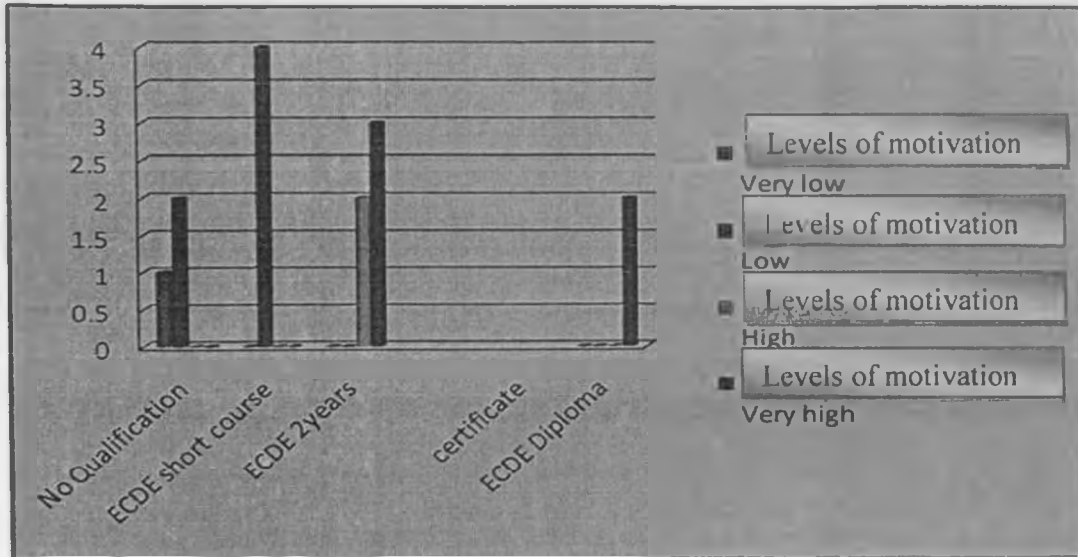


Figure 4.1.6 shows levels of motivation in relation to different levels of professional qualification which indicates that the higher the level of professional qualification of the teacher the higher the level of motivation of pre-school pupils. This verifies what Greenwald (1999) found that teachers' characteristics that included professional qualification have an influence on how a teacher is able to motivate the pre-school children in completing class work, neatness of their work and participation during science activities.

#### **4.5 Relationship of teachers' experience and motivation of pre-school children in science activities.**

The researcher was interested in knowing if there is any relationship between teachers' experience and motivation of pre-school children in science activities. From teachers' responses, teachers' experiences were classified into four intervals, while motivation of pupils was checked by the following parameters; neatness, work completion and pupils' participation, as summarized in table 4.1.7

**Table 4.1.7 Teacher's experience on motivation indicators**

No. of classes	Teacher's Experience	Motivation Indicators		
		Neatness	Work completion	Pupils participation
4	1 - 2	2	3	3
2	3 - 4	1	2	1
3	5 - 7	2	1	2
5	8 - 9	3	4	4

The findings indicated that the more the teacher was experienced in teaching the pupils, the better the pupils work on neatness and levels of work completion. Pupil's participation was also found to be better in their classes. Levels of motivation of pre-school pupils based on motivation indicators on the observation checklists indicated various levels on table 4.1.8

**Table 4.1.7 Teacher's experience on motivation indicators**

No. of classes	Teacher's Experience	Motivation Indicators		
		Neatness	Work completion	Pupils participation
4	1 - 2	2	3	3
2	3 - 4	1	2	1
3	5 - 7	2	1	2
5	8 - 9	3	4	4

The findings indicated that the more the teacher was experienced in teaching the pupils, the better the pupils work on neatness and levels of work completion. Pupil's participation was also found to be better in their classes. Levels of motivation of pre-school pupils based on motivation indicators on the observation checklists indicated various levels on table 4.1.8

**Table 4.1.8 Teacher's experience on levels of motivation**

No. of classes	Teacher's Experience	Levels of Motivation			
		Very low	Low	High	Very high
4	1 - 2	1	3	0	0
2	3 - 4	0	2	0	0
3	5 - 7	0	0	2	1
5	8 - 9	0	0	1	4

The findings indicated that 80% of the classes with 8 – 9 years of experience had very high level of motivation while 75% of the classes being handled by in experienced teachers (1-2 years) had low level of motivation.

**Figure 4.1.8 Teacher's experience on levels of motivation**

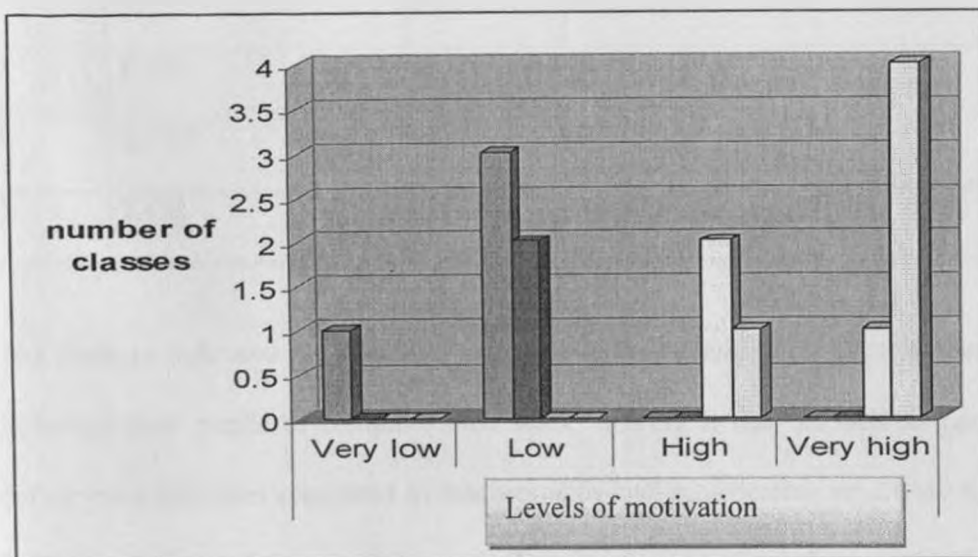


Figure 4.1.8 shows levels of motivation in relation to teachers experience where the longer the experience the teacher has the higher the level of motivation of the pre-school

pupils. This is in agreement with Lind (1995), who argued that teacher's experience had influence children's activity.

#### 4.6 Relationship between academic qualification of the teacher and motivation of pre-school children in science activities.

The researcher wanted to find out the relationship between teacher academic qualifications of pre-school children in science activities. From teachers responses, teachers were classified into four levels and motivation of pupils checked by the following indicators; neatness, work completion and pupils participation. The findings were summarized in table 4.1.9

**Table 4.1.9 Teachers academic qualification and motivation indicators**

No. of classes	Teacher's academic Qualification	Motivation Indicators		
		Neatness	Work completion	Pupils participation
1	KCPE	1	0	0
2	KJSE	1	0	0
8	KCSE	6	7	5
3	KCE	2	1	1

The findings indicated that teachers with able high academic qualification were able to influence their pupils to complete their work, making it neat as well as participation during class activities compared to teachers with low qualification who were not able to influence their pupils to do their work. Levels of motivation of pre-school pupils in relation to teacher academic qualification were checked against motivation indicators as shown in table 4.2.0

. Table 4.2.0 Teachers academic qualification on levels of motivation

No. of classes	Teacher's academic Qualification	Levels of Motivation			
		Very low	Low	High	Very high
4	KCPE	1	0	0	0
2	KJSE	1	1	0	0
3	KCSE	0	0	6	2
5	KCE	0	0	1	2

The findings indicated that teachers with high academic qualification (79%) were able to highly motivate their pre-school pupils compared to teachers with low academic qualification (21%) whose pupils had very low levels of motivation

**Figure 4.2.0: Teachers academic qualification on levels of motivation**

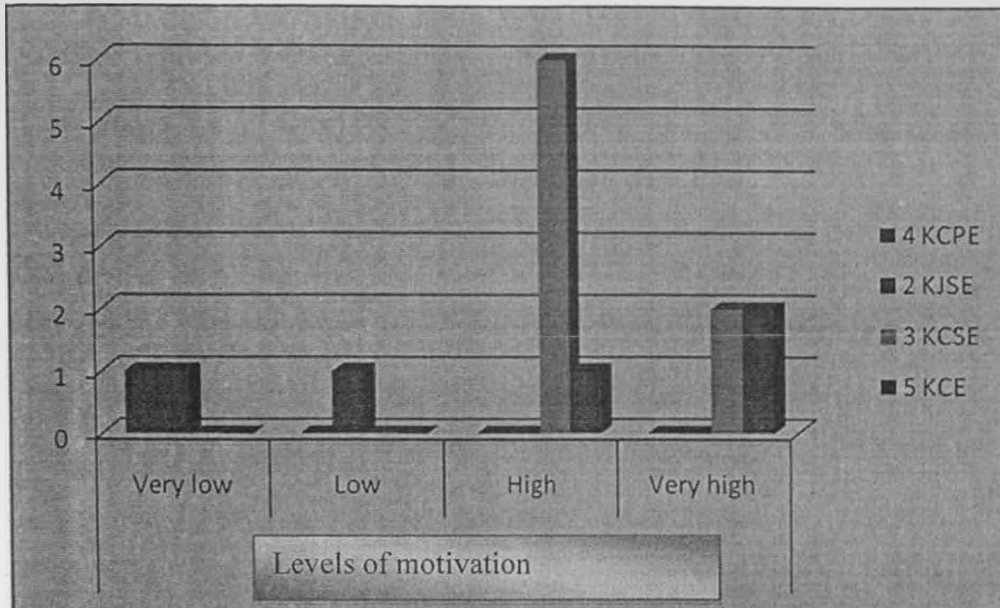


Figure 4.2.0 shows levels of motivation in relation to academic qualification where the more qualified a teacher is academically qualified, the higher the levels of motivation of the pre-school pupils. This is inline with the arguments of Baker, (1999) that to be a qualified teacher one needs at least a bachelor's degree in education.



**Table 4.2.1: How pre-primary pupils are motivated to enhance learning in science activities**

Type of motivation	Frequency	Percent
Verbal	9	65
Tangible things	3	20
Outings	1	10
Others	1	5
<b>Total</b>	<b>14</b>	<b>100</b>

Table 4.1.3 above, results show that majority of teachers (65%) motivate their pupils verbally, 20% use tangible things, 10% resort to outings and 5% uses some other methods. When asked if they received any reward during science activity, the majority of pupils said they did not. But for the few who received, the award was mainly verbal and not anything tangible. Pupils were also asked to state what they felt was their level of motivation in learning science activities and the majority said it was either high or very high.

**Figure 4.2.1 How pre-primary pupils are motivated to enhance learning in science activities**

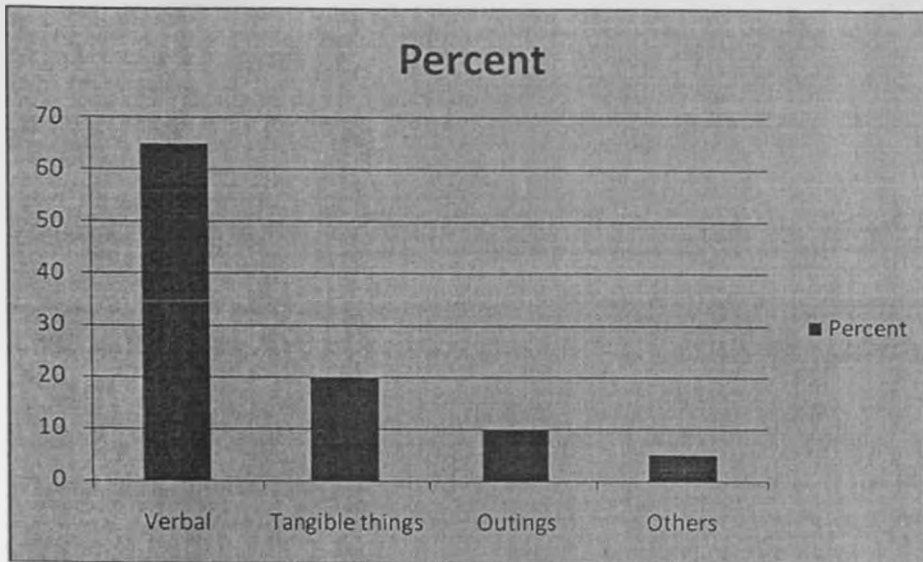


Figure 4.2.1 shows different methods of motivating pre school pupils in science activity indicated in percentages where majority of teachers motivated pupils verbally (65%).

#### **4.7 Methods of teaching science activities**

Pre-primary teachers also were asked to state the methods they used in teaching science activities whose results are shown in Table 4.1.4 below.

**Table 4.2.2 Methods of teaching science activities**

<b>Method of teaching</b>	<b>Frequency</b>	<b>Percent</b>
Write on the black board	4	30
Show them practically or conduct a demonstrations (experiments)	3	25
Just talk	5	20
Use teaching aids	1	5
Make pupils do it themselves or dictate to them what should be done	2	15
Use all available methods	1	5
<b>Total</b>	<b>14</b>	<b>100</b>

Table 4.2.2 shows the main methods used by pre-primary teachers in teaching science were writing on the black board and showing the pupils practically/conducting demonstrations (experiments). These were mentioned by 30% and 25% of teachers respectively. Just talking was mentioned by a quarter of the students whereas only 15% mentioned pupils learning by doing.

#### **4.8 Facilities available for enhancing learning of science**

Teachers were asked what facilities were available in schools for teaching science activities and results are as shown in the Table 4.1.5 below.

**Table 4.2.3: Facilities for enhancing learning in science activities**

<b>Facilities</b>	<b>Frequency</b>	<b>Percent</b>
None	7	50
Teaching charts	1	10
Text books	3	20
Electronics	0	0
Rulers	1	5
Others	2	15
<b>Total</b>	<b>14</b>	<b>100</b>

Table 4.2.3 shows, most of the teachers (50%) mentioned that there were no facilities for teaching science activities in their schools. A few used text books (20%), teaching charts (10%) and rulers (5%) while remaining (15%) used other facilities. Graphically it can be illustrated by figure 4.2.3

**Figure 4.2.3: Facilities for enhancing learning in science activities**

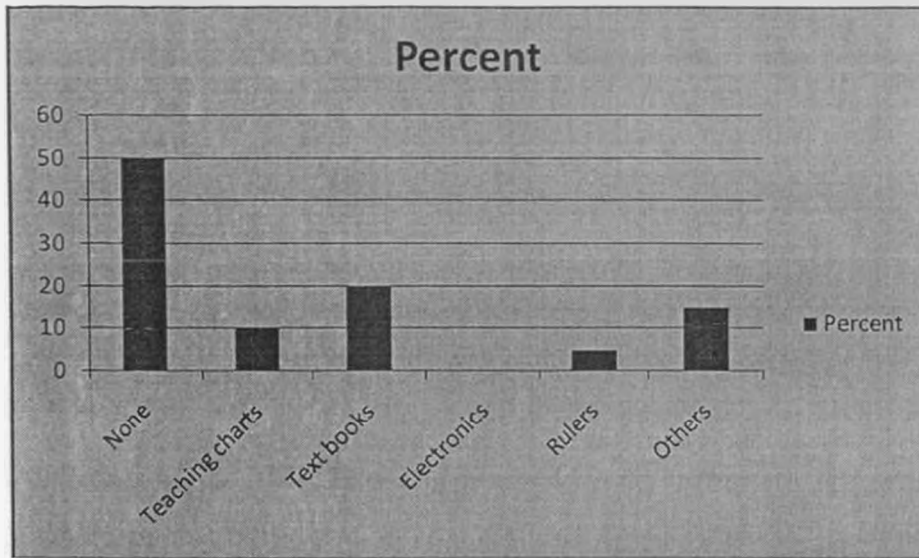


Figure 4.2.3 shows facilities for enhancing learning science activities in pre-schools expressed in percentages where most of the schools had no learning facilities ( 50%) while none of the schools that was using electronic facilities.

#### **4.9 Participation in class of pre-primary pupils**

Pre-primary school children were asked if they were interested in class activities and almost all them said they were. For those who said they were interested in class activities, the main reasons given were that they liked being with other pupils and that they liked their class teacher. A few said they had no option as disliking class activities might condemn them to perpetual life of looking after livestock, something they highly detested. When asked if they finished their work in time, majority said they did. But for those who said they did not, the reason main mentioned was due to poverty/hunger. Other reasons were lack of proper guidance from the teacher, lack of motivation as well as some subjects (such as science/mathematics) being hard to grasp. When pupils were asked to rate the neatness of pupil work in their class, the majority rated it either fair or good.

## **CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

### **5.0 Introduction**

This chapter gives an overview of what has been tackled in the chapters above in a summary. It also highlights the conclusions made based on the findings of the study as well as the recommendations that can be employed by stakeholders to improve the performance levels in preschools.

### **5.1 Summary**

The study sought to find out the influence of teacher characteristics on motivation of preschool children in learning science activities in Marimanti zone, Tharaka South district, the relationship between the age of the teacher and motivation of pre-school pupils, the relationship between professional qualification and motivation of pre-school pupils, the relationship between teachers experience and motivation of pre-school pupils, the relationship between academic qualification and motivation of pre-school pupils in science activities. The study population involved all the teachers in pre-schools as well as the pupils. The specific sample constituted of 14 teachers and 14 classes. The instruments in collection of data were questionnaires and observational checklist. These were designed to suit the different groups of respondents depending on the kind of information that was collected from each group. The data collected during the study was then coded and presented in tables and graphs. The responses from various respondents formed the basis for this analysis as well as the information obtained from data review.

## 5.2 Conclusion

In view of the above analysis, it is evident that old teachers were able to motivate their pupils to high levels compared with young teachers. This is illustrated in table 4.1.4

From table 4.1.5, levels of motivation of pre-school children, depend on professional qualification of teacher in that the higher the qualification of the teacher the higher the levels of pre-school pupil's motivation in science activities. Table 4.1.8 shows that experienced teachers had very high level of motivation of pre-school pupils compared to in experienced teachers who led to low levels of motivation during science activities. Table 4.2.0 also indicate that there is a relationship between academic qualification of teachers and levels of motivation of pre-school pupils in that teacher with higher academic qualification were highly able to motivate their pre-school pupils compared to teachers with low academic qualification whose pupils had very during science activities.

## 5.3 Recommendations

Following the findings of this study, the following recommendations were made.

- ❖ The pre-school teachers should be academically qualified at least up to KCSE level to enhance understanding of children psychology and child motivation during science activities.
- ❖ More men should be encouraged to join ECD colleges to minimize gender imbalance in ECD centers during science activities.
- ❖ Pre-school teachers should professionally be trained to inculcate professional ethics and instill skills of handling pre-school pupils during science activities.



- ❖ Government to improve terms of service for pre-school teachers to reduce staff turnover which will improve experience of teachers handling pre-school pupils in science activities

#### **5.4 Recommendation for further study**

From this study it's quite clear that there is need for further research in the following areas.

- ❖ Better ways of improving ways of teaching science activities in pre-schools.
- ❖ Ways of improving physical facilities and resources in pre-schools in order to improve science activities.
- ❖ The effect of government support to pre-schools on pre-schools pupils participation in science activities

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**APPENDICES**

**APPENDIX A: OBSERVATIONAL CHECKLIST FOR CHILDREN**

**Section A**

a) School.....

b) Do you get any reward during science activity?.....

.....

If Yes, what kind of rewards?

a) Verbal ( )

b) Tangible ( )

Others (Specify).....

**SECTION B: CHILDREN CLASS PARTICIPATION**

a) Are you interested in science activity? Yes ( ) No ( )

If Yes, why? .....

.....

b) Do you complete your work in time? Yes ( ) No ( )

If No, why?.....

.....

c) What is the level of the neatness of pupils work as observed by the reasercher?

a) Excellent ( )

b) Very good ( )

c) Good ( )

d) Fair ( )

e) Poor ( )

### SECTION C: LEVEL OF MOTIVATION

What is the level of motivation of children in science activities?

- a) Very high ( )
- b) High ( )
- c) Low ( )
- d) Very Low ( )

## APPENDIX B: QUESTIONNAIRE FOR TEACHERS

Dear teacher,

I hope that you will be willing to co-operate to enable an accurate picture to be obtained about the impact of motivation on pre-school pupils' performance in science activities. Please give your honest response to the questions, so that the researcher can make a truthful assessment of the value of this program. All responses will be treated as highly confidential and no individual school will be identifiable when the responses are analyzed.

Please tick the appropriate answer where it applies.

1. a) School .....
- b) Your Gender: Male ( ) Female ( )
- c) Age .....
2. a) What is your academic qualification?  
KCPE ( ) KJSE ( ) KCSE ( ) KCE ( )
- b) What is your professional qualification?  
ECDE Short Course ( ) ECDE 2 Years' Certificate ECDE Diploma

If any other, please specify.....

- c) How long have you been teaching (teaching experience)?.....Year(s)
- 3 a) How do you motivate your pupils to enhance learning in science activities?  
Verbal ( ) Tangible things ( ) Outings ( ) others
- a) What methods do you use when teaching science activities?.....

.....

4. What facilities do you have to enhance learning of science activities?

- a) Teaching charts
- b) Realiers ( )
- c) Textbooks ( )
- d) Electronics ( )
- e) Others (specify).....



**APPENDIX C: TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN  
POPULATION.**

N	S	N	S	N	S
10	10	220	140	1,200	291
15	14	230	144	1,300	297
20	19	240	148	1,400	302
25	24	250	152	1,500	306
30	28	260	155	1,600	310
35	32	270	159	1,700	313
40	36	280	162	1,800	317
45	40	290	165	1,900	320
50	44	300	169	2,000	322
55	48	320	175	2,200	327
60	52	340	181	2,400	331
65	56	360	186	2,600	335
70	59	380	191	2,800	338
75	63	400	196	3,000	341
80	66	420	201	3,500	346
85	70	440	205	4,000	351
90	73	460	210	4,500	354
95	76	480	214	5,000	357
100	80	500	217	6,000	361
110	86	550	226	7,000	364
120	92	600	234	8,000	367
130	97	650	242	9,000	368
140	103	700	248	10,000	370
150	108	750	254	15,000	375
160	113	800	260	20,000	377
170	118	850	265	30,000	379
180	123	900	269	40,000	380
190	127	950	274	50,000	381
200	132	1,000	278	60,000	382
210	136	1,100	285	100,000	384

*Source: Krejcie R.V. and Morgan D. (1970).*

**Key**

N - Is population size

S - Sample size

## APPENDIX D: BUDGET FOR THE STUDY

Item	Cost (Kshs)
1. Computer and Services	
a. Typing and Proposal Writing	8,000
b. Typing the Final Report	2,800
c. Photocopying Questionnaires	6,000
2. Stationery	
a. Writing Materials	600
b. Duplicating Papers	300
c. Pens	300
3. Traveling Expenses	
a. Top Pre-testing Questionnaire	3,000
b. Top Administer Questionnaires	5,500
c. To collect questionnaires	5,500
d. To contact Supervisor	25,000
4. Accommodations and food during visit to the Library	15,000
5. Binding Expenses	
a. Binding Proposal	3,000
b. Binding final project report (6 copies)	4,500
6. Computer services for data analysis	20,000
<b>Total Cost</b>	<b>99,500</b>

### APPENDIX E: TIME TABLE

<b>Month/Year</b>	<b>Event</b>
August – September 2011	Research proposal development
February 2012	Research permit procurement and data collection
August 2012	Compiling of the research project, printing & Binding of the documents
November	Submission of the research Project