EFFECT OF REFLECTIVE TEACHING ON THE PERFORMANCE OF PRE-SCHOOL CHILDREN IN CREATIVE ACTIVITIES IN KIKUYU SUB-COUNTY, KENYA

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF EDUCATION IN EARLY CHILDHOOD EDUCATION IN THE DEPARTMENT OF EDUCATIONAL COMMUNICATION AND TECHNOLOGY, UNIVERSITY OF NAIROBI

2016
DECLARATION

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

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

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DEDICATION

This work is dedicated to my husband James and our sons Paul and Allan.
ACKNOWLEDGEMENT

I sincerely acknowledge my supervisor Professor Jane C. Gatumu for her commitment and dedication to the success of this work. Having taught me Research Methods, she ensured that I had the impetus to carry out this study. Besides, she also taught me Pedagogy, which has helped me to improve greatly as an educator. I also acknowledge Dr. Japheth Origa who taught me Statistics that was very useful for this study and Sarah Kamau for helping me to polish up my statistics skills.

I constantly made reference to literature that was available at the University of Nairobi (CEES) library, I acknowledge Susan Wangu Mwangi, a Library Staff member for her support. I also acknowledge the Kikuyu Sub-County Director of Early Childhood Education, Nellius W. Thuo, the Head Teachers, the Deputy Head Teachers, the Pre-School Teachers and the Pre-Unit Children of the schools that I worked with for their willingness to be a part of this study.

I thank my parents Mr Paul Muti & [Mrs Nellie Njeri Muti-deceased] for taking me through basic and higher education. I sincerely thank my family for the support they accorded me during my entire study period.
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ABBREVIATIONS AND ACRONYMS

DICECE: District Centre of Early Childhood Education

ECE: Early Childhood Education

KICD: Kenya Institute of Curriculum Development

KIE: Kenya Institute of Education

MOE: Ministry of Education

NACECE: National Centre of Early Childhood Education

UNESCO: United Nations Educational, Cultural and Scientific Organisation
ABSTRACT

The purpose of this study was to investigate the effect of reflective teaching on the performance of pre-school children in creative activities in Kikuyu sub-county, Kiambu County. The study method used was experimental design. The focus was on five (5) pre-schools with 146 children and 11 pre-school teachers. Data was collected using questionnaires for the pre-school teachers. The children were tested in creative activities before the study and again after two weeks of teaching. A documentary analysis was used to establish the status of the teachers’ schemes of work and lesson plans for creative activities and also if the children had creative activities workbooks. An observation schedule was used to find out the delivery of the creative activity lesson. The mean scores, standard deviations, t-scores and p-values were computed using Statistical Package for Social Studies. A paired sample t-test was used to find out whether there was a statistically significant difference between the mean scores of children’s performance in creative activities in classes where teachers use reflective teaching and the ones where they do not. The results show that the experimental group had a statistically significant difference at (p < 0.0001). This suggests that pre-school children learn creative activities better when they are allowed to reflect on what they have been taught and allowed to ask the teacher questions. Based on the findings, it is recommended that pre-school teachers should be trained to use reflective teaching as a method of teaching creative activities while those that are already teaching should have in-service training to equip them with this skill.
CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Creative activities allow children to be innovators. According to Gustina and Sweet (2014), governments are going beyond the tradition of supporting creativity in arts. They are encouraging creativity in all disciplines. In Sweden, the Swedish Compulsory School Curriculum requires teachers to encourage students to develop their creative expression (Ministry of Education and Cultural Affairs, 1994). In Australia, the government stated that while developing a healthy arts industry, it was critical to capture innovation in order to develop a unique Australian identity, (Commonwealth of Australia 2009, 192). In Finland, it is compulsory to teach arts subject in primary and secondary schools.

In the U.S.A, the US Secretary of Education Arne Duncan, acknowledged the inventors of the iPhone and the developers of Google who have combined creativity with innovation and intelligence to transform the way we communicate, socialize and do business (President’s Committee on the Arts and Humanities 2011). Craft (2006), while referring to the changing economy in the UK acknowledged that education achievement in terms of excellence in depth and grasp of knowledge is no longer sufficient, what is critical for thriving and surviving is creativity. According to Lee &Breitenberg (2010), education policies in the Asian countries acknowledged that in China, creative thinking and innovation will be vital to their economic success. The development of design education as part of a national policy is particularly strong in other Asian countries such as Korea, Singapore and Japan.
According to Mbiti (2014), one key product of creativity meeting the needs of the society is the mobile money transfer concept (for example the M-pesa). Using an ethnographic study in three communities, it was concluded that this mobile money transfer concept has enabled small businesses to expand and grow while increasing the circulation of money in the communities. In Kenya, pre-school creative activities are those creative tasks which involve direct participation of children to acquire basic creative skills like drawing, colouring and painting, cutting, threading, tracing, tearing, printing, pasting, sticking and modelling (KIE 2008). The children use the five senses which are touching, seeing, smelling, tasting and hearing as they do creative activities and discover more facts about creativity.

Pre-schools in Kenya have a formal curriculum and syllabus that is developed by the Kenya Institute of Curriculum Development (KICD). According to the suggested weekly plan of activities, Creative Activities has been allocated only two lessons of half an hour each per week, (KIE 2008). Therefore, even at the planning level and also at the actual teaching level, not much attention has been accorded to the teaching of creative activities. Teaching creative arts requires much more materials than the traditional paper and pencil which can be adequate for other learning activities like language and number work. According to the ECDE Programme Officer at the Kikuyu Sub-County, government pre-schools are maintained using the money which parents pay for school fees. The teachers have to cope with inadequate teaching and learning resources with poor remunerations and this affects the performance in creative arts.

At Kikuyu Sub-County pre-school teachers mainly use written evaluation questions to get feedback from the children. This mainly involves the use of ‘written tests’
where children answer questions that help the teacher to assess if the children have learnt what was set out to be taught in the lesson plan. The teachers can also ask the children verbal questions that are directed at the teacher’s actions during the creative activity lesson. A reflective teacher is able to nurture creativity in children because they are able to understand a child’s feelings, intentions and beliefs as they develop art work during a creative arts lesson (Tomlin & Viehweg, 2015). Reflective teaching causes a teacher to evaluate and re-evaluate their experiences in class. This causes a teacher to develop creative and innovative approaches and therefore improving the understanding of learners (Coyle, 2002).

1.2 Statement of the problem

Upon enquiring at the Office of the Sub-County Director of Education, there are no records of the performance of Creative Activities in pre-schools at Kikuyu Sub-County. Secondly, the government of Kenya has given the pre-schoolers the good will that is required for the learning of Creative Activities through the ECE teachers’ training, supervision of teaching by the Quality Assurance and Standards Officers and the provision of teacher's guides and pupil’s books that have been approved by the Kenya Institute of Curriculum Development. Thirdly, reflective teaching is not included in the pre-school teachers training curriculum and it is therefore not a widely used teaching tool in Kenya. The teacher: pupil ratio is 1: 30. This is very ideal for the effective teaching of pre-school children. However, there is a general but hidden disinterest by pre-school teachers in this sub - county to teach creative arts, majority of them focus on teaching language and number work activities which are seen to be more important when children join primary schools.

According to Makero (2012), a lot of past studies have concentrated on topics based
on being handicapped, mentally retarded, child abuse, child neglect and sexual abuse. Until now, no study has been done on the performance of creative arts neither on the effect of reflective teaching at the Kiambu County. This is the gap the researcher is attempting to fill. The researcher hopes to encourage pre-school teachers to appreciate reflective teaching and use it as a tool in the teaching of creative arts and so ask themselves hard questions, e.g., why did I teach the way I taught today, and what did the children gain from me today? The researcher also hopes that educational planners will give creative arts more prominence than they have done in the past and encourage pre-school teachers not to ignore it while giving more attention to the teaching of other subjects in the curriculum.

1.3 Purpose of the study
The purpose of the study was to investigate the effect of reflective teaching on the performance of pre-school children in creative activities in Kikuyu sub-county, Kiambu County.

1.4 Research Objectives
The study seeks to determine whether there is a statistically significant difference between the mean scores of children’s performance in creative arts in classes where teachers use reflective teaching and the ones where they do not.

i. Establish the influence of journal keeping on the performance of creative activities by pre-school children.

ii. Determine the influence of peer mentoring on the performance of creative activities by pre-school children.

iii. Establish the influence of feedback from children on the performance of creative activities by pre-school children.
1.5 Hypotheses of the study

The main hypothesis is to test whether there is a statistically significant difference between the mean scores of children’s performance in creative activities in classes where teachers use reflective teaching and the ones where they do not.

The specific hypotheses are:

i. \( \text{Ho}_1 \): The mean score of pre-school children performance in creative activities whose teachers keep journals is not significantly different from the mean score of pre-school children whose teachers do not keep journals.

ii. \( \text{Ho}_2 \): The mean score of pre-school children performance in creative activities whose teachers use peer mentoring is not significantly different from the mean score of pre-school children whose teachers do not use peer mentoring.

iii. \( \text{Ho}_3 \): The mean score of pre-school children performance in creative activities where teachers get feedback from the children is not significantly different from the mean score of pre-school children whose teachers do not get feedback.

1.6 Significance of the study

The study will be useful to the Kenya Institute of Curriculum Development (KICD), whose task is to develop curriculum, review and improve on the existing pre-school teachers’ training curriculum so that they can consider to include training on reflective teaching. The study will be useful to National Centre of Early Childhood Education (NACECE) and DICECE who work closely with MOE and whose mandate is more specific to pre-school teacher training. They are also involved in research on pre-school children’s education, dissemination of such research findings and training of trainers of pre-school children (Kipkorir and Njenga, 1997). The government may choose to roll out in-service training on the use of reflective
teaching and also include it in the curriculum at teacher training colleges.

### 1.7 Limitations of the study

According to Simon & Goes (2013), limitations are issues that arise in a study which are out of the researcher's control. A common limitation is the scope of the study which sometimes may not allow for generalizations (Mugenda and Mugenda, 1999). The study was limited to only pre-school teachers and the children in their classes whose age is between 5 and 6 years. The researcher collected data from pre-schools in only 1 out of 5 wards in Kikuyu Sub-County. This is a small representation and it will therefore not allow for generalization. The size of the sub-county and the number of pre-school children in its pre-schools is not within the researcher’s control. A second limitation relates to other training of teachers on reflective teaching which was not be controlled by the researcher. This is because some teachers might have read about reflective teaching out of an interest and a desire to improve their teaching techniques. This can give them an opinion about reflective teaching that is not the researcher’s opinion. Thirdly, many respondents are suspicious of strangers and investigations because they do not want to be seen as not to follow the curriculum as outlined by KICD. To counter this, the researcher developed tools that addressed the limitation and a letter of introduction which stated clearly the purpose of the study.

### 1.8 Delimitations of the study

This study focused on the effect of reflective teaching on the performance of pre-school children in creative activities in Kikuyu sub-county, Kiambu County, Kenya. 13 (thirteen) pre-school teachers and 146 (one hundred and forty six) pre-school
children participated in the research. The topic that was covered was ‘joining dots and colouring.’

1.9 Basic assumptions

The researcher assumed that the pre-school teachers have not had prior training on reflective teaching and that they would use the skills to teach creative activities once the training was conducted.

1.10 Definition of the Key Terms

Children: Pre-school children that are aged between 5 and 6 years.

Children’s feedback: Critical assessment through from pre-school children questions directed at the teacher’s actions during teaching.

Creative: Involving the use of skill and the imagination to produce something new or the work of art.

Effect: A change that something causes in something else.

Journal keeping: A record of events kept by the teacher while teaching.

Non-reflective teaching: A technique of teaching where a teacher does not use any element of reflective teaching.

Peer mentoring: Is a relationship where a pre-school teacher of the same or higher rank teaches and guides another teacher of a lower rank.

Performance: How well or badly a preschool child does something.

Pre-school: A school for children between the ages of about three and five years.

Pre-school Teacher: A teacher who teaches children the ages of about three and five years.
Reflective teaching: A practice of teaching where a teacher asks themselves questions that adds value to learning.

Teaching: Action that facilitates learning.

1.11 Organisation of the study

Chapter one is based on background to the problem, statement of the problem, purpose of the study, research objectives, research hypotheses, significance of the study, limitations of the study, delimitations of the study, basic assumptions of the study and definition of key terms. Chapter two is based on literature reviewed as follows: - introduction, the teaching and the effect of creative activities, reflective teaching and creative activities, theoretical framework and conceptual framework. Chapter three deals with the introduction, research design, population, sampling procedure and sample size, instruments, validity and reliability, procedure for data collection, data analysis and ethical concerns.

Chapter four is based on the findings and discussions of the data collected. While the final and fifth chapter deals with the summary, conclusions, recommendations and suggestions for further research.
CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter focuses on preschool creative activities, the teaching and the effect of creative activities, reflective teaching and creative activities, theoretical framework and the conceptual framework of the study. Questions abound on who a reflective teacher is. According to Katz, (1993), the effectiveness of a teacher requires a combination of knowledge, skills and personal characteristics. According to Ndung’u (2014), lack of effective teaching of creative activities by pre-school teachers in pre-schools in Kikuyu Sub-County has to do with the depth and mastering of knowledge, their skills, their personal characteristics and the support by other stakeholders like parents. According to Cantor (1990), one can have both knowledge and skill, but without a disposition to make use of them, very little will happen. Since personal characteristics are rooted feelings and beliefs, we can neither observe them directly nor assess them through traditional methods, which make them difficult to identify. Hence, the need for this study on the effect of reflective teaching

2.2 The Teaching of Creative Activities

According to Tonui, (2015), creative activities enable children to express themselves. When a teacher understands this need, they intentionally integrate creativity art and drama in other learning activities. This helps the children to develop better in their imagination, creativity and personality and essentially, they are able to perform better in academics. Effective teaching and learning of creative activities requires the participation of all stakeholders. Although parents are aware of
such responsibilities, there is very low parental involvement in this respect, (Ndani,
2008). The teaching and learning materials that are needed for creative activities for
example, paper, glue, scissors, paint and paint brushes, etc. are fairly expensive.
Even though pre-school teachers are trained to use locally available materials (KIE
2008) to lower the cost, many schools still fall short of sufficient supplies for
effective teaching and learning of creative activities. The pre-school teacher has an
option of various activities to do as suggested by KICD. Some of these activities are
drawing, colouring, painting, cutting, threading, tracing, tearing, printing, pasting,
sticking and modelling (KIE 2008).

Creative expression enables a child to develop their feelings and emotions. The task
of the teacher is to create an enabling environment by providing the opportunity and
the materials to develop their innate ability to the fullest, Tonui (2015). The children
will also develop their co-ordination and personality to the fullest and perform better
in academics. Creative activities such as drawing, colouring and painting also helps
children to develop fine motor skills in writing, typing, dressing and eating. Art that
requires the use of paint develops self-regulation in children because they have to
wait until the paint dries up for them to appreciate the final product. During a
creative activity lesson, children are allowed to express themselves freely.

According to Pate, O’Neill, Byun, McIver, Dowda and Brown (2014), children
should be allowed to choose their activities they move about the classroom freely.
Examples of activities that pre-school children can choose from is joining dots, free
drawing, painting, colouring, spooning and pouring. Teaching creative activities
requires the children to be active participants as they manipulate paper, paint, glue,
mud, scissors, brushes etc. This brings out the creative gifting that is in each one of
them. According to Boden (1992), creativity means ‘creating new and original combinations using old ideas’. According to Lampert (2006), students who are involved in creative arts practise aesthetic inquiry and reflective thinking. To enhance these areas within the process of education, it is suggested that education be infused with the arts (McKenna, 2012). The teaching of creative arts requires the teacher and the student to use aesthetic judgement. According to Dulama, Ilovan and Vanea (2009a) artistic judgement involves the use of our senses and ‘a combination of intellectual opinions, will, desire, preferences, values, subconscious behaviour, conscious decision, training and sociological institutions’.

This is why preschool children draw familiar elements like cars, flowers and family member figures. The correct use of instructional activities helps to promote logical thinking, inquiry and problem solving in students (Fraser and Walberg 1995). Therefore, if the correct instructional activities were applied to teach creative activities in Kikuyu Sub-County, there would perhaps be an improvement in the general academic performance.

### 2.3 Reflective Teaching and Creative Activities

According to Otunga, Odero and Barasa (2011), the teacher’s choice of methods of teaching influences the learner’s mastery of content. Learners whose teachers engage poor methods of teaching are left unsatisfied and their academic performance is affected. This was further strengthened by Kafu (2010) who states that poor methods employed by teachers discourage the learners thinking ability. According to Ostorga (2006), reflection causes a teacher to develop teaching practices that give the best result in children’s learning. Studies done by Kember, Leung, Jones, Loke, McKay, Sinclair, Tes, Webb, Wong and Yeung(2000) suggest that there are two levels of
reflective action. The first one is reflective thinking and the second one is critical reflection. Critical reflection is deeper, more thoughtful and more profound reflection. The findings borrowed heavily from Dewey who argued that inability to be critical can cause a person to make hasty conclusions without examining all other options.

Studies about reflective teaching do not show how pre-school children’s performance in creative arts can be improved in Kenya. The researcher intends to use reflective teaching as a tool that will fill in this gap by encouraging the teachers to use some of its elements which are journal keeping, peer mentoring and the use of feedback from children.

### 2.3.1 Journaling and Creative Activities

Journal keeping requires the teacher to write a daily record of the teaching and learning experiences. This will include what the teacher did and did not do while in class and the outcomes of the actions. It will form the basis of later reflection. According to Farrel (2008), keeping a journal helps the teacher to become more effective as they analyse the internal and external factors that affected teaching and learning. According to Reiner (2004), keeping a journal helps a teacher to remember what happened in the class and use this information to determine whether the objectives for that lesson were achieved or not. Findings from a study done at an elementary school in Ontario, Canada by Wubbles, Bekelman and Hooymers (1992) found that ‘teachers’ self-report of their interaction with students correlated well with their self-report and correlated even better with their espoused ideals.’ These studies did not show whether the use of reflective journaling by pre-school teachers would help to improve children’s academic performance in developing nations like
Kenya.

According to a study done to examine the influence of preschool teachers’ reflective teaching on children’s academic performance in Molo District, Kenya, Thumbi (2012) found that ‘there was statistically significant difference in children’s mean scores whose teachers’ used reflective teaching while it was not observed in classes where teachers did not use it’. Since journal keeping is one of the elements of reflective teaching which Thumbi (2012) studied, this study sought to find out if its use will significantly affect the performance of creative activities by preschool children in Kikuyu Sub-County.

2.3.2 Peer Mentoring and Creative Activities

According to Nolan, (2007), when a more experienced practitioner provides professional guidance to one or more novice practitioners, either on a 1:1 basis or as a group, they are having “a peer relationship”. Decades of research have highlighted the positive effect of student–student interaction on student motivation, learning and persistence in courses and curricula (Kata, 2009). Traditionally, the theoretical underpinnings of positive interaction effects have invoked the social aspects of the face-to-face classroom environment and learning in general. Theories such as Vygotsky’s zone of proximal development (Vygotsky, 1978) and Lave and Wenger’s situated learning (Lave & Wenger, 2005) recognize that peer interactions awaken students to their own potential and help them establish a community of learners. Through peer tutoring, students are able to share useful information, effective problem-solving strategies and even positive attitudes while learning as both tutors and students of one another (Falchikov, 2001). Tutors report improved communication skills and greater content understanding, while tutees describe reduced anxiety, greater satisfaction and more transferable skills as a result of
tutoring (Topping, 1996). Teachers and parents can provide quality learning experiences when they effectively scaffold children’s learning (Leong & Bodrova, 2012).

2.3.3 Feedback from Children and Creative Activities

Getting feedback from children can help them to motivate children in the classroom. According to Saddler (1989) there will be increased motivation or engagement. A teacher can get feedback from the children mainly through the questions that children ask in class and also from the scores of a written test done by the children. From the questions that children ask, the teacher is able to reflect about the lesson they have taught. According to Page (1990), a teacher does not have the time to talk to every child; however, a reflective teacher can be intentional in allowing the children to talk, hence enabling them to express their level of understanding. The purpose of written tests is to review and revisit the student performance measure generated during initial planning, Steinberg and James-Reid (1983). Getting feedback from children improves on classroom interactions between the children and the teacher.

A study done by Raimes (1983) which indicated that a pupil that is praised increases his/her participation in class more than if they had been corrected for what he/she does badly. According to a study done by Wanjiru (2015), children demonstrated good participation in class when they were allowed to ask the teacher questions about what they were learning. According to research done by August, Shanahan (2006), all children benefit from high-quality instruction and classroom interactions, regardless of language status, race/ethnicity, or special needs. A study done by Mutiso (2014) to investigate the impact of reflective teaching on pre-school
children’s performance in science activities in Iveti Division, Kathiani Sub-county, Machakos County found that the post-test mean score in preschool classes where teachers used reflective teaching was higher at 58.73% than the post-test mean score in preschool classes where teachers do not use reflective teaching that was at 51.08%. Since the use of written evaluation questions is one of the elements of reflective teaching which Mutiso (2014) studied, the study sought to find out if its use will significantly affect the performance of creative activities by preschool children in Kikuyu Sub-County.

2.4 Theoretical Framework

This study is based on constructivism which begun with the developmental work of Jean Piaget (1896–1980). This theory suggests knowledge is developed and given meaning depending on the learner’s experiences. According to Piaget, the role of the teacher in facilitating learning is very important not as the traditional teacher who was the ‘know it all’ but as a guide who leads a learner from the known to the unknown. Whereas constructivism is a theory about knowledge, reflective teaching is a tool for professional development. They share the same assumptions about knowledge and learning (learning begins from the known to the unknown) and also that ideas and actions are an important aspect of learning. Osterman (1998). Reflective practice was first introduced by John Dewey and later adopted by Shon (1983). The researcher is putting across reflective practice as a better way of teaching creative arts because the teachers will allow the children to be part of the teaching process. Children will be allowed to discuss and share ideas of what they already know and then develop the new items by drawing and painting, modelling objects using clay or play dough or any other artistic approach.
2.5 Conceptual Framework

Figure 2:1 illustrates the conceptual framework of the effect of reflective teaching on the performance of pre-school children in creative arts in Kikuyu Sub-County.
Figure 2:1 Conceptual Framework of the effect of reflective teaching on the performance of pre-school children in creative arts in Kikuyu Sub-County.
Preschool teachers can employ various methods of teaching. This largely depends on their training. Most of the pre-school teachers in Kikuyu Sub County are DICECE trained at certificate level. These teachers have an inclination towards the traditional method of teaching where the children are passive recipients of knowledge. In this study, the teachers in the experimental group were required to use three elements of reflective teaching which are journal keeping, peer mentoring and use of feedback from children during the creative activity lesson.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, which for this study is experimental design. The population, the sampling procedure and sample size indicate the number of participants. The instruments used, validity and reliability, procedure for data collection and data analysis indicate how the data was collected. The ethical concerns indicate the measures that were taken to ensure that this study complied with acceptable standard procedures used for research.

3.2 Research Design

According to Kirk (1995), an experiment aims at establishing a ‘causal’ connection between an independent and a dependent variable. Therefore, the researcher selected an experimental research study. In this study, the pre-schools that participated were randomly selected and assigned to two groups, the experimental group (Group I) and the control group (Group II). A pre-test was conducted for each group. In this study, the two groups were further be divided into four groups each were paired. Then, the teachers from the experimental group (Group I) were trained to use the elements of reflective teaching which are journal keeping for Group IA, peer mentoring for Group IB, use of feedback from children for Group IC and the use of all elements of reflective teaching for Group 1D. The treatment was denied to the teachers in the control group (Group II). The learners were taught creative arts for two weeks to ensure uniform contact time with their teachers. The post test was conducted for each group and the results were compared to determine the effect of the treatment.
3.3 Population

According to information available from the Office of the Sub-County Director of Education, Kikuyu, there are a total number of 34 public pre-schools in Kikuyu-Sub County that are located in government sponsored primary schools. The total number of children is 2,504. For education purposes, the Kikuyu Sub-County has been divided into 5 wards. Averagely, all public pre-schools in Kikuyu Sub-County are moderately endowed with teaching/learning materials and the setting is mainly suburban. For this study, the researcher used a population of 13 pre-school teachers and 146 pre-school children. All the children are in Pre-Unit class, are between 5 and 6 years old and are of mixed gender. According to Egle (2004), at this age, their hand muscle movement is more developed to do creative activities. They are also able to ask questions and give the teacher feedback about their classroom experiences.

3.4 Sampling Procedure and Sample Size

Kikuyu Sub-County is divided into 5 (five) wards with a total of 34 (thirty four) public pre-schools. The total number of pre-school teachers is 81 and the total number of pre-school children is 2,504 with Nachu Ward 1,089 children, Sigona Ward 295 children, Kinoo Ward 188 children, Karai Ward 451 children, Kikuyu Ward 481 children. According to Mugenda and Mugenda (1999), if the target population is small, selecting a sample size would be meaningless. In such a case, the whole population is used. Each public pre-school at Kikuyu Sub-County has two groups of pre-school classes. The Nursery Class is for children aged between three and four years while the Pre-Unit Class is for children aged between five and six years.
In this study, the Pre-Unit classes were purposively selected because the following reasons. One, their hand muscles are well developed in order to colour and join the dots meaningfully. Secondly, they are able to ask the teachers questions which were useful especially for Group 1C which was being studied for the use of getting feedback from children. To get the sample of the children, all the children in the selected classes participated in the study. The total number of children was 146 (one hundred and forty six). A pilot test was conducted at one (1) pre-school which was randomly selected. Using the simple random technique, four (4) pre-schools were selected for the experimental group while another one (1) was selected for the control group.

3.5 Instruments

In this study, for the pre-school teachers, the researcher used a training module, questionnaires, a documentary analysis and an observation schedule to collect data. For the pre-school children, the researcher used a written test.

3.5.1 Training Module

In order to prepare the pre-school teachers for this study, the researcher developed a module of training pre-school teachers from the experimental group (Appendix III). The training was for the pre-school teachers in the experimental group. This group of teachers were required to use reflective teaching as a technique for teaching pre-school children creative activities. They were trained on the meaning and the importance of reflective teaching and on the use of elements of reflective teaching. The teachers in Group 1A were trained to teach using journal keeping, those in Group 1B were trained to teach using peer mentoring, and those in Group 1C were
trained to teach using the use of feedback from children while those in Group 1D were trained to teach using all the elements of reflective teaching which for this study are journal keeping, peer mentoring and getting feedback from children.

3.5.2 Questionnaires

Questionnaires were administered by the researcher to all the pre-school teachers that were involved in this study. Information sought to find out their academic qualifications as pre-school teachers. Using the questionnaires, the researcher also sought to find out if the pre-school teachers of elements of reflective teaching as a technique of teaching. The researcher also sought to find out the depth of teaching creative activities at pre-schools in Kikuyu Sub-county and if the children were motivated by having their creative activity work exhibited on the school notice boards. (Appendix IV).

3.5.3 Written Tests

To find out the performance of pre-school children in creative activities, the researcher conducted two written tests. The pre-test was conducted to determine the performance of the children in creative activities at the start of the study. After the intervention, the post-test was conducted to determine their performance at the end of the study. The children from the experimental group and the control group did the same test. The children were tested on their creativity in colouring, joining the dots skills and their ability to identify colours (Appendix V).
3.5.4 Documentary Analysis

The researcher used a documentary analysis to find out if the pre-school teachers used a scheme of work and a lesson plan to prepare for the creative activity lesson. The study also sought to find out if the pre-school children were provided with a plain page exercise book to use during the creative activity lesson.

3.5.5 Observation Schedule for Teachers

The researcher also observed the pre-school teachers as they taught creative activities (Appendix VI). The observation was done on different dates before and after the intervention. To establish how the teaching and learning activities are carried out, the researcher observed the teachers for their preparedness of the collection and preparation of creative activity materials, how they introduced the activity to the children and how they demonstrated the creative activity to the children.

3.6 Validity and Reliability

3.6.1 Validity

The researcher prepared the questionnaire for the pre-school teachers and the written test for the pre-school children. The instruments were given to the project Supervisor who read through each item. The Supervisor ascertained that the instruments had no weaknesses especially in the clarity of the questions and the relevance of the content. Then the instruments were piloted at one pre-school that had been purposively selected from Kikuyu Sub-County but which was not participating in the study. The researcher piloted the questionnaire with teachers to test for content validity.
3.6.2 Reliability

According to Mugenda and Mugenda (1999), reliability establishes the measure at which an instrument yields similar results after repeated trials. A test-retest was conducted for the questionnaires at the piloting stage. The instruments were administered to appropriate participants at the pilot pre-school. The same group was retested with the same instruments after two weeks. The results of the first test were compared to the results of the second test were co-related to get the reliability coefficient using Pearson’s product moment formula.

\[
\rho = \frac{N \sum XY - (\Sigma X)(\Sigma Y)}{\sqrt{[N \sum X^2 - (\Sigma X)^2][N \sum Y^2 - (\Sigma Y)^2]}}
\]

Where
N= Number of respondents
X= scores from the first test
The results were as follows, \( r \) was found to be 0.99 for the experimental group and 0.97 for the control group which showed that there was a very strong correlation. Therefore, the questionnaires were reliable.

Reliability for the children’s test was computed using Pearson Product-Moment Correlation Coefficient which was at 0.94. This is a high reliability. For the documentary analysis, the researcher recorded contents based on the creative activity schemes of work, lesson plans and creative activities children’s workbooks. The researcher had trained a research assistant to collect information using the documentary analysis form. A table on the presence and absence of records was developed. According to Landis and Koch (1977), a value of 0.79 on the Index of Interrater Reliability it was found the records of the researcher and the research
assistant had a substantial agreement. For the observation schedule, the researcher recorded contents of the preparation of creative activity materials, the introduction of creative activity lesson to children and for demonstration of creative activity to children. A research assistant was trained to collect information using the documentary analysis form. A table on the presence and absence of records was developed. A value of 0.79 on the Index of Interrater Reliability it was found the records of the researcher and the research assistant had a substantial agreement.

3.7 Procedure for Data Collection

From the College of Education and External Studies, University of Nairobi, the researcher was given an authorization letter to conduct the study. Using this confirmation letter, the researcher sought for a research permit from the National Commission for Science, Technology and Innovation. After the research permit was granted, the researcher sought for permission to conduct this study from each of the Head Teachers of the selected schools. The researcher administered the questionnaire personally to the teachers. The questionnaires were returned after two weeks and the findings were recorded.

The researcher administered the children’s pre-test and the post-test after two weeks. The researcher marked the tests. The marks were recorded without the children’s names. Using the documentary analysis, the researcher observed how the teachers taught creative activities. The preparedness by the teachers and the resources available to teach creative activities was also captured by finding out if the teachers prepared schemes of work and lesson plans, and if the children had a plain page in the exercise books on which they could draw and color during the creative activity lesson. Using the lesson plan, the teachers were able to think carefully on their
choice of learning resources for teaching creative activities. The researcher helped the teachers to develop good lesson plans and vary activities while teaching creative activities.

The teachers in Group 1A were required to write a daily record of the teaching and the learning experiences in a journal. Secondly, the teachers in Group 1B were required to invite another teacher to observe them as they teach. The teachers in Group 1C had a peer observer who was a teacher that is more experienced in teaching and he/she was expected to record their observations. Thirdly, the teachers in Group 1C were required to encourage the children in their classes to freely express themselves about their learning experience and ask any questions. The teacher was expected to answer all the questions and make the adjustments that the children would like done.

The teachers in Group 1D were expected to teach using all the elements of reflective teaching which are journal keeping, peer mentoring and the use of getting feedback from the children. The teachers in the control group taught the children in their classes without using any element of reflective teaching (non-reflective teaching). According to Polland and Tann (1989), the teachers collected data on what was happening while teaching creative activities analyse the data, and then make a decision and plan on what to do with the findings. Using a written test, the learning outcomes of the children in the experimental group were compared to those of children from the control group. The scores were subjected to statistical analysis to determine the effect of reflective teaching on the performance of pre-school children in creative arts in Kikuyu Sub-County.
3.8 Data Analysis

According to Kombo and Tromp (2006) data analysis is the process of examining what has been collected during the study and making deductions and inferences. For the first, the second and the third hypotheses, means scores and t-tests were used to analyse the data. The mean scores were used to interpret the outcomes of the pre-test and the post test. The t-test was used to determine if there is a significant difference between the mean scores of the pre-test and the post-test for both the experimental and the control groups. The t-test seeks to answer questions on whether there is a significant difference between the mean scores of children whose teachers use journal keeping, peer mentoring and receive feedback from children during creative activity lessons and those whose teachers do not use any element of reflective teaching.

The main hypothesis was tested using ANOVA at alpha= 0.05 level of significance. If the p-value exceeded alpha = 0.05 the null hypothesis was accepted. If the p-value was equal or less than alpha = 0.05, the null hypothesis was be rejected. The mean scores, t-scores and p-values were computed using the Statistical Package for Social Studies software. For this study, the content qualitative data was interpreted using themes where the responses for each item were tallied and given the figure.

3.9 Ethical Concerns

According to Yuko (2009) knowledge cannot be persuaded at the expense of human dignity. The researcher explained to the subjects the purpose of the research, the benefits and the methods of data collection to be used. The subjects were given opportunity to ask any questions about the study. The subjects gave an informed consent to be part of the study without being persuaded, threatened or given bribes.
The researcher respected each participant’s right of privacy and confidentiality. The teachers did not indicate their names on any part of the questionnaire. To ensure the study was safe for the children, the researcher advised the teachers to keep the classrooms free from any possible danger like spilling on the floor, sharp scissors, etc. The researcher exercised fairness in distribution by using random sampling of subjects. The researcher has acknowledged all participants this final document and has made reference of every intellectual material that has been quoted.
CHAPTER FOUR
FINDINGS AND DISCUSSIONS

4.1 Introduction
This chapter presents the findings on the study that is based on the four research hypotheses. The first hypothesis was the mean score of pre-school children performance in creative activities whose teachers keep journals is not significantly different from the mean score of pre-school children whose teachers do not keep journals. The second hypothesis was the mean score of pre-school children performance in creative activities whose teachers use peer mentoring is not significantly different from the mean score of pre-school children whose teachers do not use peer mentoring. The third hypothesis was the mean score of pre-school children performance in creative activities whose teachers get feedback from the children is not significantly different from the mean score of pre-school children whose teachers do not get feedback. The fourth hypothesis was to test whether there is a statistically significant difference between the mean scores of children’s performance in creative activities in classes where teachers use reflective teaching and the ones where they do not.

4.2 Findings on the Bio-Data of Pre-school Teachers in Kikuyu Sub-County
Using the questionnaires, the study sought to find out the teacher’s academic qualification, professional qualification and their length of service. The study did not seek to find out the gender, the religion and the age of the pre-school teachers. The findings are recorded in Table 4.1.
Table 4:1: Pre-School Teacher’s Characteristics in Kikuyu Sub-County

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Academic Qualification</td>
<td>K.C.P.E</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K.C.S.E</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Certificate</td>
<td>8</td>
</tr>
<tr>
<td>Highest Professional Qualification</td>
<td>Diploma</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Degree</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5 Years and below</td>
<td>2</td>
</tr>
<tr>
<td>Length of Service</td>
<td>6 to 10 Years</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>11 to 15 Years</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>16 Years and above</td>
<td>2</td>
</tr>
</tbody>
</table>

From the findings, all the teachers have attained secondary school education and they are professionally trained to teach as Early Childhood teachers. Out of the thirteen teachers, 8 are certificate holders while only two are Diploma teachers. This is an indicator that the level of professional training of pre-school teachers at the Kikuyu Sub-County is still at the lowest possible level. The experience of the teachers ranges between below 5 years and above 16 years with most of the teachers having taught between 6 and 10 years. The level of training and the years’ experience is sufficient for the teachers to teach effectively at pre-school level. However, even though the pre-school teachers are all trained and experienced, they pay a lot of attention to teaching language and mathematics activities while ignoring creative activities because pre-schools are seen as a foundation for primary school where there is much emphasize on academic performance. The teachers do not also
practice reflective teaching, largely because there was no training on the use of reflective teaching at the pre-school Teacher Training Colleges.

4.3 Findings of the First Hypothesis: The mean score of pre-school children performance in creative activities whose teachers keep journals is not significantly different from the mean score of pre-school children whose teachers do not keep journals.

To establish the influence of journal keeping on the performance of creative activities by pre-school children, the research hypothesis is that journal keeping will significantly improve the performance of pre-school children in creative activities. Before the intervention, the children in the experimental group were not able to pick and use the correct colours for a specific item. For example, the general assumption is that leaves are colour green and the tree trunk is colour brown. Most of the children could not identify the correct colours as seen from the pre-test. Figure 4.1 shows a sample of a creative activity pre-test done by one child from Group 1A.
Figure 4.1 Journal Keeping – Pre-Test
Before the intervention, the children did not show satisfactory choice of colours and acceptable joining of the dots skills. To show the performance of pre-school children in creative activities, the results of the pre-test that was conducted before the intervention and the post-test after the intervention are shown in Table 4.2.

**Table 4.2 Pre-School Children Performance in Creative Activities in classes whose teachers keep Journals.**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group pre-test</td>
<td>26.22</td>
<td>37</td>
</tr>
<tr>
<td>Experimental group post-test</td>
<td>74.19</td>
<td>37</td>
</tr>
</tbody>
</table>

The experimental group had a pre-test mean score of 26.22. After the intervention, the experimental group had a mean score of 74.19. To show the performance of pre-school children in creative activities after the intervention, Figure 4.2 shows a sample of a creative activity post-test done by the same child from Group 1A.
Figure 4.2 Journal Keeping – Post-Test
After the intervention, there is an obvious indication of better understanding of the use of appropriate colours. The children showed satisfactory choice of colours and acceptable levels of joining the dots skills. The tremendous improvement of the experimental group can be attributed to the use of journal keeping as an element of reflective teaching to teach creative activities. This outcome is in agreement with a study done by Farrel (2008), which indicates that keeping a journal helps the teacher to become more effective as they analyse the internal and external factors that affected teaching and learning. From the journals, one of the teachers improved on how they explained the correct use of different colours after realising that the children were using the wrong colours for different items.

For example during the pre-test, some children had used colour green on the ‘tree trunk’ but after being taken outside the classroom to observe a tree, they improved on their choice of colours during the post-test. To establish how strongly the post-test and the pre-test are related to each other, the average performances before and after introducing journal keeping were compared using paired sample t-test. The results are shown in Table 4.3

**Table 4:3 Analysis of Paired Samples T-Test for Journal keeping for the Experimental Group**

<table>
<thead>
<tr>
<th>Average difference in performance</th>
<th>95% confidence interval</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>47.973</td>
<td>[38.957  56.989]</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

The result of the test indicates that there is a statistically significant improvement in performance after introducing journal keeping by teachers (p <0.0001). We are 95%
confident that the actual difference in performance is between 39 and 57 marks. This is in agreement with the findings from a study done by Thumbi (2012) to examine the influence of preschool teachers’ reflective teaching on children’s academic performance in Molo District, Kenya, which found that ‘there was statistically significant difference in children’s mean scores whose teachers’ used reflective teaching while it was not observed in classes where teachers did not use it’. It is also in agreement with Farrel (2008) who found out that keeping a journal helps the teacher to become more effective as they analyse the internal and external factors that affected teaching and learning.

The study sought to find out the awareness of journal keeping amongst pre-school teachers in Kikuyu Sub-County. The teacher’s responses from the questionnaire shown in Table 4:4.

**Table 4:4 Awareness of Journal Keeping amongst Pre-School Teachers in Kikuyu Sub-County**

<table>
<thead>
<tr>
<th>Use of Journal Keeping</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>I keep a diary for my creative activity lesson experience in my class</td>
<td>Always</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Journal keeping is an element of reflective teaching which requires a teacher to write a daily record of the teaching and learning experiences. The study sought to find out if this technique improves the performance of pre-school children in creative activities. Journal keeping technique is not practiced by Pre-school teachers at Kikuyu sub-county. Some of the comments in the journals were ‘lesson plan not prepared’, ‘materials for creative activity like paint and papers not bought’ and
children want more time to draw and colour. However, after the training, the teachers admitted that they were very intentional to do the following:

First, the teachers prepared their lesson plans and collected materials for the children to use well before the lesson started. Secondly, there was a renewed alertness towards their actions in class while teaching creative activities. Finally, the teachers were careful to take action on what they had noted for purposes of the next creative activity lesson. The teachers admitted that they were now making constant reference to the objective for creative activities as it is outlined in the syllabus. This is in agreement with Reiner (2004) who states that keeping a journal helps a teacher to remember what happened in the class and use this information to determine whether the objectives for that lesson were achieved or not.

The researcher observed that the children started to look forward to the creative activity lesson because they were going to draw, paint and colour. There was a notable improvement on the classroom control by the teachers. The children became more attentive and active during the creative activity lesson. The children were also seen to be more excited about the creative activity lesson during the time of continued journal keeping by their teacher. This might have contributed to the notable significant improvement of the performance of pre-school children in creative activities in classes where the teachers practised journal keeping. This renewed awareness by the creative activity teachers coupled with the eagerness of the pre-school children to learn creative activities might have contributed to the significant improvement of their performance.
4.4 Findings of the Second Hypothesis: The mean score of pre-school children performance in creative activities whose teachers use peer mentoring is not significantly different from the mean score of pre-school children whose teachers do not use peer mentoring.

To establish the influence of peer mentoring on the performance of creative activities by pre-school children, the research hypothesis is that peer mentoring will significantly improve the performance of pre-school children. The study sought to find out the performance of pre-school children in creative activities. Before the intervention, the children did not show satisfactory choice of colours and acceptable joining of the dots skills. The performance of pre-school children in creative activities before the intervention was not without its challenges. Before the intervention, the children in this group were not able to pick and use the correct colours for a specific item. For example, the general assumption is that leaves are colour green and the tree trunk is colour brown. Figure 4.3 shows a sample of a creative activity pre-test done by one child from Group 1B.
Figure 4.3 Peer Mentoring – Pre-Test
The results of the pre-test that was conducted before the intervention and the post-test after the intervention are shown in Table 4.5.

**Table 4:5 Pre-School Children Performance in Creative Activities in classes whose Teachers use Peer Mentoring.**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group pre-test</td>
<td>20.26</td>
<td>19</td>
</tr>
<tr>
<td>Experimental group post-test</td>
<td>53.68</td>
<td>19</td>
</tr>
</tbody>
</table>

The experimental group had a pre-test mean score of 20.26. After the intervention, the experimental group had a mean score of 53.68. Figure 4.4 shows a sample of a creative activity post-test done by the same child from Group 1B.
Figure 4.4 Peer Mentoring – Post-Test
After the intervention, the children showed satisfactory improvement in the choice of colours and acceptable levels of joining the dots skills. Theories such as Vygotsky’s zone of proximal development (Vygotsky, 1978) and Lave and Wenger’s situated learning (Lave & Wenger, 2005) recognize that peer interactions awaken students to their own potential. Hence, the use of the peer mentoring technique by the teachers can be attributed to the tremendous improvement of the experimental group. To establish how strongly the post-test and the pre-test are related to each other, the average performances before and after introducing peer mentoring were compared using paired sample t-test. The results are shown in Table 4:6

Table 4:6 Analysis of Paired Samples T-Test for Peer Mentoring for the Experimental Group

<table>
<thead>
<tr>
<th>Average difference in performance</th>
<th>95% confidence interval</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.421</td>
<td>[23.713          43.129]</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

The result of the test indicates that there is a statistically significant improvement in performance after introducing peer mentoring (p <0.0001). We are 95% confident that the actual difference in performance is between 24 and 43 marks. It was observed that the teachers in this group improved on all the comments that were given by their peer mentor who had observed them as they taught creative activities.

The study also sought to find out if the pre-school teachers in Kikuyu Sub-County invite other competent teachers to assess them while teaching creative activities and if this technique improves the performance of pre-school children in creative activities. The teacher’s responses from the questionnaire shown in Table 4:7 were
used to help the researcher to understand the mean scores of the children
performance in creative activities.

**Table 4:7 Awareness of Peer Mentoring amongst Pre-School Teachers in Kikuyu Sub-County**

<table>
<thead>
<tr>
<th>Use of Peer Mentoring Statements</th>
<th>Always</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Not Sure</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>I invite a competent teacher to assess me while I teach creative activity lesson</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I share my feelings with other teachers about children difficulties in creative activities</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

According to Nolan, (2007), peer mentoring is a practice where a more experienced practitioner provides professional guidance to one or more novice practitioners. Of concern were Items 2 and 10 (Appendix III) which indicate that 4 out of 13 teachers sometimes invite a competent teacher to assess them while they teach creative activities. Another 5 out of 13 teachers were found to share their feelings with other teachers about children difficulties in creative activities. Some of the comments by the peer mentor were ‘the scheme of work was available’, ‘the lesson plan was available’, ‘improve on classroom control’, ‘the teacher explained to the children what the lesson was all about at the end, this should have been at the beginning’ and ‘the class control skills was not good.’ The peer mentor noted that the creative activity teachers progressively improved in their preparedness to teach so as not be found with too many mistakes by the observer.

The introduction of the lesson was seen to be more vibrant with the use of exciting songs and an explanation by the teachers to the children on what they will do and on
what materials they will use during the lesson. There was a notable improvement on the classroom control by the teachers. The children became more attentive and active during the creative activity lesson. The children were also seen to be more excited about the creative activity lesson during the time of continued observation. This might have contributed to the significant improvement of the performance of pre-school children in creative activities in classes where the teachers practised peer mentoring. These observations are in agreement with theories such as Vygotsky’s Zone of Proximal Development (Vygotsky, 1978) and Lave and Wenger’s situated learning (Lave & Wenger, 2005) recognize that peer interactions awaken students to their own potential and help them establish a community of learners.

4.5 Findings of the Third Hypothesis: The mean score of pre-school children performance in creative activities where teachers get feedback from the children is not significantly different from the mean score of pre-school children whose teachers do not get feedback.

To establish the influence of getting feedback from children on the performance of creative activities by pre-school children, the research hypothesis is that getting feedback from children will significantly improve the performance of pre-school children. Further, a pre-test was conducted before the intervention to find out the performance of the children in creative activities in classes whose teachers get feedback from children. Before the intervention, the children did not show satisfactory choice of colours and acceptable joining the dots skills. Figure 4.5 shows a sample of a creative activity pre-test done by one child from Group 1C.
Figure 4.5 Feed Back From Children – Pre-Test
The performance is shown in Table 4:8.

**Table 4:8 Analyses of the Mean Scores for use of Feedback from Children for the Experimental Group.**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group pre-test</td>
<td>30.00</td>
<td>20</td>
</tr>
<tr>
<td>Experimental group post-test</td>
<td>69.75</td>
<td>20</td>
</tr>
</tbody>
</table>

The experimental group had a pre-test mean score of 30.00. After the intervention, the experimental group had a mean score of 69.75. To show the performance of preschool children in creative activities after the intervention, Figure 4.6 shows a sample of a creative activity post-test done by the same child from Group 1C.
Figure 4.6 Feed Back From Children – Post-Test
After the intervention, the children showed satisfactory improvement in the choice of colours and acceptable levels of joining the dots skills. Hence, the use of the teaching technique where teachers get feedback from children can be attributed to the tremendous improvement of the experimental group. To establish how strongly the post-test and the pre-test are related to each other, the average performances before and after introducing getting feedback from children were compared using paired sample t-test. The results are shown in Table 4.9.

**Table 4:9 Analysis of Paired Samples T-Test for use of getting Feedback from Children for the Experimental Group**

<table>
<thead>
<tr>
<th>Average difference in performance</th>
<th>95% confidence interval</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.75</td>
<td>[28.788 50.712]</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

The result of the test indicates that there is a statistically significant improvement in performance after receiving feedback from children (p <0.0001). We are 95% confident that the actual difference in performance is between 29 and 51 marks.

A teacher can get feedback from the children mainly through the questions that children ask in class and also from the scores of a written test done by the children. From the questions that children ask, the teacher is able to reflect about the lesson they have taught and improve on the instructional methods. The study sought to find out if the pre-school teachers get feedback from the children as they teach creative activities. The teacher’s responses from the questionnaire shown in Table 4:10.
Table 4:10 Awareness of getting Feedback from Children amongst Pre-School Teachers in Kikuyu Sub-County

<table>
<thead>
<tr>
<th>Feedback from children Statements</th>
<th>Always</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Not Sure</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>I ask children questions at the end of the creative activity lesson</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I have a creative activity corner in my class</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>I always display children creative activity work at the school notice board</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Of concern were Items 3, 12 and 13 (Appendix III) which indicate that 8 out of 13 teachers always ask the children questions while they teach creative activities, 6 out of 13 teachers were found to have a creative activity corner in their class and 8 out of 13 teachers display the children’s creative activity work on the school notice board.

During the study, some of the questions that the children asked were ‘what are we going to draw today?’ Or ‘what are we going to paint today? In the classes where children were allowed to ask teachers questions, the children seemed to interact better with each other because they were allowed to talk to each other about the work they were doing. In the class, children would be heard consulting each other about which questions they should ask their teacher. For example, ‘let us ask teacher why we are using green colour crayon on the leaves’. There was notable improvement on the teacher’s willingness to allow the children to ask questions visa vie the traditional teaching setting where the teacher was the only person allowed to talk while in class.

According to research done by August, Shanahan (2006), all children benefit from high-quality instruction and classroom interactions, regardless of language status,
race/ethnicity, or special needs. The questions that the children asked their teacher during the creative activity lesson satisfied the researcher’s curiosity on the impact of this teaching technique while teaching. The outcome of the post-test suggest that the mean score of pre-school children performance in creative activities where teachers get feedback from the children is significantly different from the mean score of pre-school children whose teachers do not get feedback. This is in agreement to a study done by Raimes (1983) which indicated that a pupil that is praised increases his/her participation in class more than if they had been corrected for what he/she does badly.

4.6 Findings of the Main Hypothesis: The purpose of the main hypothesis was to test whether there is a statistically significant difference between the mean scores of children’s performance in creative activities in classes where teachers use reflective teaching and the ones where they do not.

To determine the influence of using all the three elements of reflective teaching, a pre-test was conducted before the intervention to find out the performance of the children in creative activities in classes whose teachers use reflective teaching. Before the intervention, the children did not show satisfactory choice of colours and acceptable joining the dots skills. Figure 4.7 shows a sample of a creative activity pre-test done by one child from Group 1D.
Figure 4.7 All Elements of Reflective Teaching – Pre-Test
The performance is shown in Table 4:11.

Table 4:11 Analysis of the Mean Scores for use of All Elements of Reflective Teaching for the Experimental Group

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group pre-test</td>
<td>29.42</td>
<td>26</td>
</tr>
<tr>
<td>Experimental group post-test</td>
<td>76.35</td>
<td>26</td>
</tr>
</tbody>
</table>

The pre-test mean score was 29.42 while the post-test mean score was 76.35. Figure 4.8 shows a sample of a creative activity post-test done by the same child from Group 1D. According to Haig (2004), education and training can help teachers to develop reflective teaching skills where they can combine various elements of reflective teaching. The improvement in children’s performance in the group where teachers used all the elements of reflective teaching is in agreement with a study done by Thumbi (2012) which found that ‘there was statistically significant difference in children’s mean scores whose teachers’ used reflective teaching while it was not observed in classes where teachers did not use it’. It is also in agreement with Topping (1996) who found that tutors report improved communication skills and greater content understanding, while tutees describe reduced anxiety, greater satisfaction and more transferable skills as a result of tutoring.
Figure 4.8 All Elements of Reflective Teaching – Post-Test
After the intervention, the children showed satisfactory improvement in the choice of colours and acceptable levels of joining the dots skills. The use of reflective teaching can be attributed to the tremendous improvement in performance after the intervention. This is in agreement with Zeichner and Liston (1996) who argue that the professional aspect of a teacher improves when the teacher uses elements of reflective teaching. When the teacher analyses data, reflects on it and acts appropriately, the learning outcomes of the children improve.

To establish how strongly the post-test and the pre-test are related to each other, the average performances before and after introducing the use of all elements of reflective teaching were compared using paired sample t-test. The results are shown in Table 4.12.

**Table 4:12 Analysis of Paired Samples T-Test for use of All Elements of Reflective Teaching for the Experimental Group**

<table>
<thead>
<tr>
<th>Average difference in performance</th>
<th>95% confidence interval</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group post &amp; test</td>
<td>[38.315, 55.531]</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>pre-test</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result of the test indicates that there is a statistically significant improvement in performance after using all the three elements of reflective teaching (p <0.0001). We are 95% confident that the actual difference in performance is between 38 and 56 marks. According to Ostorga (2006), reflection causes a teacher to develop teaching practices that give the best result in children’s learning. The teachers who used all elements of reflective teaching appeared to develop strategies which improved the learning outcomes of the children.
To compare the three individual elements of reflective teaching as well as non-reflective teaching, a mixed ANOVA for repeated measures was used for analysis. The results are shown in Table 4.13. This technique takes into account the fact that measures are not all independent.

**Table 4:13 Analysis of ANOVA for the Three Elements of Reflective Teaching and Non-reflective teaching**

<table>
<thead>
<tr>
<th>Source</th>
<th>d.f</th>
<th>Sum of squares</th>
<th>Mean Square</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of teaching</td>
<td>3</td>
<td>5135.30</td>
<td>1711.77</td>
<td>7.173</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Subject teaching</td>
<td>116</td>
<td>27681.25</td>
<td>238.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time of test</td>
<td>1</td>
<td>53345.51</td>
<td>53345.51</td>
<td>205.183</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Time of teaching</td>
<td>3</td>
<td>19273.63</td>
<td>6424.54</td>
<td>24.711</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Error</td>
<td>116</td>
<td>30158.77</td>
<td>259.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For this technique, two factors have an effect on the dependent variable hence it is always important to check for the interaction of these two factors on the dependent variable. For this study the two factors are type of teaching (journal keeping, peer mentoring, feedback from children and non-reflective) and time of test (pre-test and post-test), hence we need to check for interaction of type of teaching and time of test. From the results, the interaction of the technique of teaching, [for example journal keeping, peer mentoring, feedback from children and non-reflective] with the time of teaching and testing the children is statistically significant. This implies that the effect of type of teaching is dependent on the time of test; thus we analyse the effect of teaching pre and post introduction of reflective teaching. According to Otunga, Odero and Barasa (2011), the teacher’s choice of methods of teaching
influences the learner’s mastery of content. Learners whose teachers engage poor methods of teaching are left unsatisfied and their academic performance is affected. This was further strengthened by Kafu (2010) who states that poor methods employed by teachers discourage the learners thinking ability. According to Ostorga (2006), reflection causes a teacher to develop teaching practices that give the best result in children’s learning.

Of interest is the effect of teaching after introducing reflective teaching. For the different types, we use ANOVA test. The results are shown in Table 4:14. There is a statistically significant difference in average scores across the four types of teaching.

**Table 4:14 Analysis of ANOVA for the Effect of Teaching Pre and Post Introduction of Reflective Teaching**

<table>
<thead>
<tr>
<th>Source</th>
<th>d.f</th>
<th>Sum of squares</th>
<th>Mean Square</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>3</td>
<td>16451.727</td>
<td>5483.909</td>
<td>20.516</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Within groups</td>
<td>116</td>
<td>31007.44</td>
<td>267.306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>47459.167</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study sought to find out if there is a statistically significant difference between the various elements of reflective teaching. The results are shown in Table 4:15.
Table 4:15 Analysis of Pair-wise Comparisons of Journal Keeping, Peer mentoring, Feedback from Children and Non-Reflective Teaching

<table>
<thead>
<tr>
<th>Types of teaching compared</th>
<th>p-value of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal keeping vs. peer mentoring</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Journal keeping vs. feedback from children</td>
<td>0.812</td>
</tr>
<tr>
<td>Journal keeping vs. non reflective</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Peer mentoring vs. feedback from children</td>
<td>0.028</td>
</tr>
<tr>
<td>Peer mentoring vs. non reflective</td>
<td>0.654</td>
</tr>
<tr>
<td>Feedback from children vs. non reflective</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

The results of the pair-wise comparisons indicate that there is a significant difference in average performance between pre-school children whose teachers kept journals and those whose teachers practiced peer mentoring. There is no significant difference in average performance between pre-school children whose teachers kept journal and those whose teachers got feedback from children. There is a significant difference in average performance between pre-school children whose teachers kept journals and those whose teachers used non reflective teaching. There is a significant difference in average performance between pre-school children whose teachers practiced peer mentoring and those whose teachers got feedback from children. There is no significant difference in average performance between pre-school children whose teacher had peer mentoring and those whose teachers used non reflective teaching.

There is a significant difference in average performance between pre-school children whose teachers got feedback from children and those whose teachers used non reflective teaching. The findings from the pairwise comparisons of Journal Keeping,
Peer mentoring, Feedback from Children and Non-Reflective Teaching are in agreement with the findings from a study done by Mutiso (2014) to investigate the impact of reflective teaching on pre-school children’s performance in science activities in Iveti Division, Kathiani Sub-county, Machakos County found that the post-test mean score in preschool classes where teachers used reflective teaching was higher at 58.73% than the post-test mean score in preschool classes where teachers do not use reflective teaching that was at 51.08%. Finally, the study sought to compare the performance of pre-school children in creative activities in classes where teachers use all elements of reflective teaching and those whose teachers do not use any element of reflective teaching. The results are shown in Table 4:16.

**Table 4:16 Pre-School Children Performance in Creative Activities in classes whose teachers use All Elements of Reflective teaching and those who’s Teachers do not use Reflective teaching**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>All types of reflective</td>
<td>76.35</td>
<td>26</td>
</tr>
<tr>
<td>teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non reflective teaching</td>
<td>47.95</td>
<td>44</td>
</tr>
</tbody>
</table>

The mean score in pre-school children performance in classes whose teachers use all elements of reflective teaching is 76.35 while in classes whose teachers do not use any element of reflective teaching is 47.95. The results show a big difference in performance which suggests that when a teacher engages all the elements of reflective teaching while teaching creative activities, the performance of the children is better. This is in agreement with Thumbi (2012) whose findings in a study done at Molo District showed that there was a statistically significant difference in children’s
mean scores whose teachers’ used reflective teaching while it was not observed in classes where teachers did not use it’.

An independent two sample t test was used to compare performance of the pre-school children whose teachers practiced all three elements of reflective teaching against those who did non-reflective teaching. The results are shown in Table 4:17.

**Table 4:17 Analysis of an Independent Two Sample T-Test to compare the use of Reflective teaching and Non-Reflective teaching**

<table>
<thead>
<tr>
<th>Average difference in performance</th>
<th>95% confidence interval</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>28.392</td>
<td>[21.049 35.734]</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

The result of the test show that there is a significant difference in average performance between pre-school children whose teachers used all three elements of reflective teaching and those whose teachers used non reflective teaching. We are 95% confident that the actual difference in performance is between 38 and 56 marks. The study sought to find out the use of reflective teaching amongst pre-school teachers in Kikuyu Sub-County. The findings from the documentary analysis are shown in Table 4:18.
Table 4:18 Findings on the use of Reflective Teaching using Documentary Analysis at Pre-Schools in Kikuyu Sub-County

<table>
<thead>
<tr>
<th>Elements of reflective teaching</th>
<th>Schemes of work</th>
<th>Lesson plans</th>
<th>Children’s workbooks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal keeping school</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
</tr>
<tr>
<td>Peer mentoring school</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
</tr>
<tr>
<td>Feedback from children School</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Use of All elements of Reflective teaching school</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Use of Non-reflective teaching school</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

It was noted that prior to the intervention, teachers at the preschool that was practicing the use of all elements of reflective teaching did not prepare schemes of work and lesson plans for the creative activity lesson. The children in that school did not have workbooks for creative activities.

The teacher’s responses to the questionnaires are shown in Table 4:19.

Table 4:19 Awareness of the importance of Creative Activities amongst Pre-School Teachers in Kikuyu Sub-County

<table>
<thead>
<tr>
<th>Feedback from children</th>
<th>Response</th>
<th>Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe that creative activities are helpful to children</td>
<td>Always</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Rarely</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Not Sure</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>0</td>
</tr>
</tbody>
</table>
Of concern was Item 14. All the teachers acknowledge that creative activities are very important to the children, yet, only a few of them have shown effort in teaching it. According to Otunga, Odero and Barasa (2011), the teacher’s choice of methods of teaching influences the learner’s mastery of content. Learners whose teachers engage poor methods of teaching are left unsatisfied and their academic performance is affected. Reflective teaching causes a teacher to evaluate and re-evaluate their experiences in class (Coyle, 2002). Initially, the teacher struggled with the idea of the use of reflective teaching. As the study went on, she realised that it was useful to take note of all what was happening in the classroom during the creative activity lesson.

Journal keeping helped the teacher to remember what she had done and she made sure she acted on her comments. A peer mentor observed that no explanation was given to the children as to why they were doing the creative activity because prior to the intervention, the class teacher did not have a lesson plan to start with. This satisfied the researcher’s curiosity that another more experienced teacher can help a less experienced teacher to notice their weaknesses during teaching and improve on them. An improvement in the performance of the teacher causes the children to improve in their learning. During the study, the children whose teachers used all the elements of reflective teaching asked their teachers questions during the creative activity lesson.

Of notable improvement was the eagerness by the children to do painting. Some of the questions that the children asked were ‘can we use any brush to paint?’, ‘is the paint good for drinking?’ The reflective teachers were eventually able to combine their past experiences (through journaling) with their present experiences (through
getting feedback from children and the peer teacher) and plan for the future experiences. Such teacher to child interactions might have contributed to the improved performance of pre-school children in creative activities whose teachers used reflective teaching.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter comprises of the finding of the study, the conclusions, the recommendations and the suggestions for further research. The conclusions are based on the findings that were advanced from the study to address the effect of reflective teaching on the performance of pre-school children in Kikuyu Sub-County, Kenya. The recommendations are based on the conclusions made.

5.2 Summary of the Findings
The purpose of the study is to investigate the effect of reflective teaching on the performance of pre-school children in creative activities in Kikuyu sub-county, Kiambu County. The review of related literature was done based on the teaching and the effect of creative activities and also on reflective teaching and creative activities which comprised of journaling, peer mentoring and feedback from children. An experimental research design was used to carry out the investigations. The target population comprised of five (5) pre-schools that were randomly selected and divided into two groups. The experimental group had four (4) pre-schools and the control group had one (1) pre-school. The total number of pre-school teachers in the study was eleven (11).

The instruments used were questionnaires, written tests and a documentary analysis. The questionnaires were administered to the teachers. The children did two (2) sets of tests, a pre-test and a post-test. The mean scores, t-scores and p-values were computed using Statistical Package for Social Studies package. The documentary analysis was used to establish if the teachers had schemes of work and lesson plans
for creative activities and if the children had creative activities workbooks. The validity and reliability of the instruments was established with guidance from the Supervisor.

In order to carry out the investigation, the following four (4) hypotheses were used.

**Ho₁**: The mean score of pre-school children performance in creative activities whose teachers keep journals is not significantly different from the mean score of pre-school children whose teachers do not keep journals. The mean scores for the experimental group were (for the pre-test, m = 26.22 and for the post-test, m=74.19) while those of the control group were (for the pre-test, m = 39.22 and for the post-test, m=47.95). At 95% confidence interval with p<0.0001, the null hypothesis is rejected. We conclude that the mean score of pre-school children performance in creative activities whose teachers keep journals is significantly different from the mean score of pre-school children whose teachers do not keep journals.

**Ho₂**: The mean score of pre-school children performance in creative activities whose teachers use peer mentoring is not significantly different from the mean score of pre-school children whose teachers do not use peer mentoring. The means scores for the experimental group were (for the pre-test, m = 20.26 and for the post-test, m=53.68) while those of the control group were (for the pre-test, m = 39.22 and for the post-test, m=47.95). At 95% confidence interval with p<0.0001, the null hypothesis is rejected. We conclude that the mean score of pre-school children performance in creative activities whose teachers use peer mentoring is significantly different from the mean score of pre-school children whose teachers do not use peer mentoring.
Ho₃: The mean score of pre-school children performance in creative activities where teachers get feedback from the children is not significantly different from the mean score of pre-school children whose teachers do not get feedback. The means scores for the experimental group were (for the pre-test, m = 30.00 and for the post-test, m=69.75) while those of the control group were (for the pre-test, m = 39.22 and for the post-test, m=47.95). At 95% confidence interval with p<0.0001, the null hypothesis is rejected. We conclude that the mean score of pre-school children performance in creative activities where teachers get feedback from the children is significantly different from the mean score of pre-school children whose teachers do not get feedback.

The main null hypothesis was to test whether there is a statistically significant difference between the mean scores of children’s performance in creative activities in classes where teachers use reflective teaching and the ones where they do not. The means scores for the experimental group were (for the pre-test, m = 29.42 and for the post-test, m=76.35) while those of the control group were (for the pre-test, m = 39.22 and for the post-test, m=47.95). At 95% confidence interval with p<0.0001, the null hypothesis is rejected. We conclude that there is a statistically significant difference between the mean scores of children’s performance in creative activities in classes where teachers use reflective teaching and the ones where they do not.

The children from the 2 pre-schools where the teachers had schemes of work and lesson plans did some creative activities in the exercise books. The children from the other 3 pre-schools whose teachers did not prepare to teach creative activities did not have exercise books for creative activities. Upon enquiry as to why they did not teach creative activities, the teachers from the 3 preschools cited challenges like
limited funds for buying crayons, powder paint, work sheets and other items needed with which the children could do some painting or colouring. The teachers also cited that the parents at the 3 pre-schools did not want to see their children colouring, they want them to read, write and do arithmetic. These observations done using the documentary analysis form indicate that there was no sufficient teaching of creative activities at the Kikuyu Sub-County.

5.3 Conclusions
From the findings of the study, it can be concluded that the use of reflective teaching to teach creative activities to pre-school children does improve their performance. This will happen when all the elements of reflective teaching are used together or in isolation of each other. This is because when used in isolation, journal keeping, peer mentoring and use of feedback from children have all been found to improve the children’s performance in creative activities. Also, the teacher’s attitude towards the teaching of creative activities improved. There was an improvement in the style of content delivery. This also caused the children to be excited to be taught creative activities and their performance did improve.

5.4 Recommendations
From the study, it was evident that the pre-school children in classes whose teachers used various elements of reflective teaching to teach creative activities improved tremendously in creativity skills. The curriculum for the pre-school teacher training colleges should be revised to include training the teachers on how to teach using reflective teaching with much emphasis on journal keeping. There is need to carry out a more far reaching study in Kenya on the effect of reflective teaching on the performance of pre-school children in creative activities.
5.5 Suggestions for Further Research

i. Thorough research should be conducted on the effect of reflective teaching on the performance of pre-school children in creative activities in a wider scale for example in other sub-counties within Kiambu County as well as in the nation of Kenya. Conduct more research on the effect of reflective teaching on the performance of pre-school children in other activities like language, number work and environmental studies.

ii. Thorough research should be conducted to find out why stakeholders like teachers, parents and other sponsors like the government do not value the teaching of creative activities, yet the pre-school children enjoy learning creativity.
REFERENCES


President’s Committee on the Arts and Humanities. (2011). *Reinvesting in Arts Education: Winning America’s Future through Creative Schools*. Washington, DC.


APPENDIX I

PERMIT

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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Website: www.nacosti.go.ke
when replying please quote:

Ref: Na

NACOSTI/P/16/63043/14034

24th October, 2016

Isabella Gathoni Muikia
University of Nairobi
P.O. Box 30197-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "Effects of reflective teaching on the performance of pre school children in creative activities in Kikuyu Sub County, Kenya," I am pleased to inform you that you have been authorized to undertake research in Kiambu County for the period ending 24th October, 2017.

You are advised to report to the County Commissioner and the County Director of Education, Kiambu County before embarking on the research project.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

GORFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kiambu County.

The County Director of Education
Kiambu County.
APPENDIX II

Letter of Introduction

Isabella Muikia,

P.O.Box 60454-00200,

Nairobi.

Tel: 0725 931 659.

To The Head Teachers and Pre-school Teachers,

Kikuyu-Sub County.

Dear Sir/Madam,

RE: Research Study

I am a graduate student at the University of Nairobi pursuing a Master of Education Degree in Early Childhood Education.

I seek your participation as stakeholders in ECE for my research, which is part of the requirements for the above mentioned course.

Please feel free to participate.

Yours faithfully,

Isabella Muikia,
E57/73947/2014.
APPENDIX III

PRE-SCHOOL TEACHERS REFLECTIVE TEACHING TRAINING

MODULE:

KIKUYU-SUB COUNTY, KENYA.

Rationale

Reflective teaching is a process of using elements of reflective teaching like journal keeping, peer mentoring and use of questions to find out what goes on in the classroom. Pre-school teachers in the experimental group will be trained on how to use these elements while teaching creative activities in order to be reflective.

Objectives

At the end of the session, pre-school teachers will be able to:-

1. Explain what reflective teaching is.
2. Explain the cyclic process of reflective teaching.
3. Role play the different elements of reflective teaching which are :-
   - Journal keeping
   - Peer mentoring
   - Use of feedback from children
4. Discuss and ask questions on the elements of reflective teaching.
APPENDIX IV

QUESTIONNAIRE FOR PRE-SCHOOL TEACHERS

1. The information you will give is for research purpose only.

2. Do not write your name on any part of this questionnaire.

3. Your utmost good faith will be highly appreciated.

SECTION I

Name of school..............................

Name of the Ward..............................

Highest academic qualifications: - K.C.P.E [   ] K.C.S.E [   ]

Other (specify)..............................

Highest professional qualifications: - Certificate [   ] Diploma [   ] Degree [   ]

Other (specify)..............................

Length of service: - 5 years and below [   ]

6 to 10 years [   ]

11 to 15 years [   ]

16 years and above [   ]

SECTION II

Tick the appropriate box for each statement given below

Key

A- Always   S- Sometimes   R- Rarely   NS- Not Sure   N- Never

<table>
<thead>
<tr>
<th>Statement</th>
<th>A</th>
<th>S</th>
<th>R</th>
<th>NS</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>I keep a diary for my creative activity lesson experience in my class</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I invite a competent teacher to assess me while I teach creative activity lesson</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>A</td>
<td>S</td>
<td>R</td>
<td>NS</td>
<td>N</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>I ask children questions at the end of the creative activity lesson</td>
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<tr>
<td>I prepare a lesson plan when I’m going to teach creative activities</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do the creative activities with the children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I provide a variety of creative activities for each lesson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I consider the various types of intelligences in my class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I consider children with learning difficulties in creative activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I share my feelings with other teachers about children difficulties in creative activities</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I always incorporate creativity while teaching children other learning activities in the syllabus</td>
<td></td>
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</tr>
<tr>
<td>I have a creative activity corner in my class</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I always display children creative activity work at the school notice board</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I always follow the teachers activity guide provided by KICD in teaching creative activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe that creative activities are helpful to children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX V

PRE-SCHOOL CREATIVE ACTIVITIES TEST 2016

Name: _________________________ Date: ______________

1. Colouring. Use correct colours to decorate the tree (10 Marks).
2. Join the dot (5 Marks).

3. Colour the circles (5 Marks)

Red
black
brown
Green
yellow
APPENDIX VI

DOCUMENTARY ANALYSIS FORM

Name of the Ward..............................................

Name of school..............................................

Date..............................................................

<table>
<thead>
<tr>
<th>DOCUMENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Activity Scheme of Work</td>
<td></td>
</tr>
<tr>
<td>Lesson Plan</td>
<td></td>
</tr>
<tr>
<td>Children’s Workbooks</td>
<td></td>
</tr>
</tbody>
</table>
# OBSERVATION SCHEDULE FOR TEACHERS

<table>
<thead>
<tr>
<th></th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of creative activity materials</td>
<td></td>
</tr>
<tr>
<td>Introduction of creative activity lesson to children.</td>
<td></td>
</tr>
<tr>
<td>Demonstration of creative activity to children.</td>
<td></td>
</tr>
</tbody>
</table>