SCHOOL-BASED FACTORS INFLUENCING TEACHERS' USE OF COOPERATIVE LEARNING APPROACHES IN TEACHING OF CHRISTIAN RELIGIOUS EDUCATION AT SECONDARY SCHOOL IN NAKURU SUBCOUNTY

Angwenyi Margaret B. Omao

A Research Project Submitted In Partial Fulfillment of the Requirements for the Award of Degree of Master of Education in Curriculum Studies

UNIVERSITY OF NAIROBI

2017

DECLARATION

This project is my original work and has not been submitted for any award in this or any other university.

_____

Angwenyi Margaret B. Omao
E55/79/375/2012

This research project has been submitted for examination with our approval as university supervisors.

_____

Dr. Lucy Njagi
Lecturer
Department of Educational Administration and Planning
University of Nairobi

_____

Prof. Winstone Akala
Assistant Professor
Department of Educational Administration and Planning
University of Nairobi

DEDICATION

To my husband Mr. Geoffrey Omao and my children Naomi, Anne, Joshua and Benjamin for their support to make me achieve my dreams

ACKNOWLEDGEMENTS

I wish to thank my lecturers of the University of Nairobi for their professional support either directly or indirectly in making the undertaking of this project a success. I also thank my supervisors Prof. Winstone Akala and Dr. Lucy Njagi for their support and guidance during the entire period of undertaking this work. I also wish to thank my friends and individuals who have been part and parcel during the development and final compilation of this report. Finally, I wish to appreciate God for His immeasurable divine guidance and for giving me the spirit to work hard. For my colleagues at University of Nairobi and Nakuru girls high school, whom I may not be able to thank in person, thanks and may God bless you.

ABSTRACT

Cooperative learning is a pedagogical practice that has attracted much attention because of a large body of research that indicates that students gain both academically and socially when they have opportunities to interact with others to accomplish shared goals. The purpose of this study was to investigate school-based factors that influence teachers' use of cooperative learning approaches in teaching Christian Religion Education in secondary schools in Nakuru Sub-County. To determine the influence of teacher competence, student ability to adapt to the learning environment, learning and teaching resources and student attitude on the use of cooperative learning approach in public secondary schools in Nakuru sub-county. The study was based on a descriptive survey research design where data and information was gathered from both primary and secondary sources. According to Mugenda and Mugenda (2003), a sample of between 10% and 30% of the target population is acceptable. Given the number of secondary schools stands at 27 within Nakuru sub-county, and that the number of teachers of Christian Religion Education is 35, a sample size of 42 teachers of Christian Religion Education was targeted. Given the number of students undertaking Christian Religion Education subject where 1080 within Nakuru sub-county, a sample of 324 students was targeted. The formulated questionnaire at the end of this proposal (Appendix 1) was used to gather data from the teachers and students of Christian Religion Education within Nakuru sub-county. Quantitative data was analyzed using descriptive and inferential statistic.. Cooperative learning approaches creates excellent opportunities for students to engage in problem solving with the help of the group members. Cooperative learning approach as an instructional procedure depends on students helping one another to learn in small groups, which is likely to enhance student motivation and hence improve performance. There is a need of continuous development and improvement of school guidelines about how the teachers can use cooperative learning approach to teach Christian Religion Education in public schools, such guidelines includes aspect such as time tabling number of lessons and the time table or movement within lessons or how the teaching of Christian Religion Education is conducted, that is, whether the school allows working in groups or the teacher must always teach. There is need to continuously in-service teachers on the use of cooperative learning approach.

TABLE OF CONTENTS

Content **Page**

CHAPTER FIVE:

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Cooperative learning is a pedagogical practice that has attracted much attention because of a large body of research that indicates that students gain both academically and socially when they have opportunities to interact with others to accomplish shared goals (Johnson & Johnson, 2002). Through interaction students learn to interrogate issues, share ideas, clarify differences and construct new understandings (Webb & Mastergeorge, 2003). When students work cooperatively together, they show increased participation in group discussions, demonstrate a more sophisticated level of discourse, engage in fewer interruptions when others speak and provide more intellectually valuable contributions (Gillies, 2006). Gillies continues to argue that by working together, students develop the need to help and support each other's learning which in turn motivates them to provide information, prompts, reminders and encouragement to others requests for help (Gillies, 2003).

Cooperative learning has been thoroughly studied in relation to its effect on student achievement with substantial evidence suggesting that this structured style of learning is effective in maximizing the learning outcomes of a range of students (Gillies, 2003; Johnson & Smith, 2004, Johnson & Johnson 1994, Slavin, 1995, Slavin, 1996). It often advocated as an effective classroom practice (Gillies, 2003, Peterson & Miller, 2004). However, cooperative learning is often under-utilised in schools (Muijs & Reynolds,

2005) and “the extent of its use has not been firmly established” (Lopata, Miller and Miller, 2003, p, 233).

Cooperative learning approaches creates excellent opportunities for students to engage in problem solving with the help of the group members, (Effadi, 2005). There should be individual and group accountability (Slavin, 2006). Slavin continues to argue that the group must be accountable for achieving its goal and members must be accountable for contributing their share of the work (Slavin, 2006). Studies conducted by Makini, (2011) Njoroge (2006) and Orora, (2006) on effects of cooperative learning also indicate high student achievement, motivation and positive attitude to learning when cooperative learning approaches are used.

Religious Education (RE) is considered crucial in promoting national and international cooperation and shaping the moral and spiritual life of learners. Religious Education (RE) is taught using conventional methods to deliver the contents in the syllabus to the learners (Githua, Macharia & Mborok, 2009). Most conventional methods of teaching RE are teacher-centered where the teacher demonstrates and summarizes the main points and there is surface learning of concepts, principles and skills (Githua, Macharia & Mboroki, 2009). Conventional methods of teaching increase students’ anxiety and negative attitude. Students become passive recipients of knowledge and resort to cramming and they hardly ask questions or interact in way of sharing thoughts, ideas and knowledge (Iksan & Zacharia, 2009). The teacher takes centre stage and dominates the classroom while

learners rely on the teacher to make decisions on what, when and how to learn (Iksan & Zacharia, 2009).

A teaching methodology is a crucial factor that affects the achievement of students (Wachanga, 2002). In the teaching of C.R.E, the learner must be exposed to cooperative learning approach that enhances critical thinking (Strain, 2008). Learners begin to think critically if the teacher acquits them with clear reasoning skills. Learners then would be able to visualize how the episodes in the life and teaching of Jesus Christ apply to themselves (Grimmit, 2005). People who are critical minded are just and they make rational decisions based on individual and societal morality (Nsubuga, 2007). Cooperative learning approach as an instructional procedure depends on students helping one another to learn in small groups, which is likely to enhance student motivation and hence improve performance (Miller, 2003). According to Muijs and Reynolds (2005), there is under-utilization of cooperative learning in schools, and the extent of its use has not been established (Lopata, Miller & Miller, 2003).

Given its crucial role, most developed countries have enlisted religion as a non-examinable subject at secondary level. For example, the teaching of RE in Australian schools is for its sake because it is averaget to equip students with knowledge based on western cultures alone (Sellick, 2003). Sellick further points out that teaching RE with the aim of inculcating values in students is equated to the distortion of education and is a violation of individual conscience. Reasons for teaching RE in American schools range from illiteracy about religion, results of religion in fuelling prejudice and antagonism

which hinders respect for diversity, peaceful coexistence and cooperative endeavors in local, national and global arena (Sellick, 2003). In America, RE is taught in order to introduce students to different aspects of faith and religious expression emanating from different religions. It deepens their knowledge and enables them understand how religion influences political, social, cultural and economic life in societies (Moor, 2010). Countries with official religion tend to provide instruction in the faith of their students. For example, in most Arab countries Islam is part of the children's education (Sellick, 2003). In Pakistan religious and moral education is mandatory for Muslim children from primary to high education. In Greece basics of orthodox religion are taught in school (www. Debate, org/ opinions/)

In Kenya, Religious Education curriculum is taught in all schools as Christian Religious Education, Muslim and Hindu Religious Education that have been approved by the Ministry of Education (Education Act, CAP, 211). C.R.E is offered as one of the core subjects in Kenyan primary schools, but as an optional subject at the secondary school level (Education Act, CAP, 211). The objective of teaching CRE in Kenya is to enable the learners to acquire social, spiritual and moral insights to thinking critically to make appropriate moral decisions in a changing society. The teaching of CRE is helpful in developing critical thinking skills of the learners which make them critical and foster discipline (Agak, Kochung & Kowino, 2012). The role of teaching CRE is to produce confident individuals who utilize thinking and critical skills in discussing and reflecting on questions that society asks and the answers which religion gives (Agak, Kochung & Kowino, 2012). Despite the role that CRE plays, its performance in 5 six years has been

noted not to be good nationally at secondary school level by ministry of education science and technology during the release of results (MOE, 2016).

Table 1.1 shows the performance of students in CRE in Kenya Certificate of Secondary Education (K.C.S.E) in Nakuru sub-county compared to the performance of geography and history that are in humanities department on a maximum average score of 12 points.

Table 1.1

Comparative performance between CRE and other Humanities in Nakuru Sub-County

Year	2010	2011	2012	2013	2014	2015	2016
C.R.E	5.083	5.221	5.661	6.496	6.302	6.114	6.402
GEOGRAPHY	6.011	5.770	6.524	7.362	7.821	7.854	8.204
HISTORY	5.510	5.932	6.820	7.01	7.350	7.381	7.832

MOE, 2016

The statistics in the table show that the trend of the performance of C.R.E has not been progressing in terms of average score as compared to other subjects in the humanity department which is geography and history. According to the comparative performance between CRE and other Humanities, Geography and History, C.R.E has continually registered low performance, indeed declining for the last three years and at no point attaining an average of 7 points on a scale of 12 points maximum average in the last six years. On the contrary, both Geography and History have consistently hit an average of 7 points for the last three years, with each year registering an upward graph. This study

intends to investigate school factors that influence use of cooperative learning approach in teaching of CRE given its effects on student achievement.

1.2 Statement of the problem

Despite the important role C.R.E as subject perform in society, there has been persistent poor performance in the subject nationally and in Nakuru sub–county as discussed in the background. This poor performance may be attributed to conventional teaching methodologies adopted by teachers, in the end leaving students uninterested in the subject. Gichaga, Kerre, Mwau and Onoka, (2013) observed that the approach to be used in the teaching of CRE should be learner-centered. This method according to Muijs & Reynolds (2005), is often under-utilised in schools.

In the last six years, Kenya National Examinations Council results showed that C.R.E. was among the subjects poorly performed in Nakuru sub-county with less than 30% students scoring a C+ and above. It is on this premise of low performance of C.R.E that the study sought to investigate the school-based factors that influence teacher use of cooperative learning approaches in teaching C.R.E in secondary schools of Nakuru sub-county. The poor performance is a serious cause of worry for the teachers and students of C.R.E, and a subject of investigation for the years to come.

Studies on the effect of cooperative learning on secondary school students' achievement have been conducted in Chemistry, Mathematics, Biology, and oral literature (Makini, 2011, Njoroge, 2006, Oraro, 2006 and Wachanga, 2002). The findings of the studies

show positive achievement. One could assume that teachers of CRE do not use cooperative learning approach and thus poor performance.

1.3 Purpose of the study

The purpose of this study was to investigate school-based factors influencing teachers' use of cooperative learning approaches in teaching CRE in secondary schools in Nakuru sub-county.

1.4 Objectives of the study

The following specific objectives guided the study:

I. To determine the influence of teachers' competence on the use of cooperative learning approach in public secondary schools in Nakuru sub-county.
II. To identify the influence of student attitude on the use of cooperative learning approach in the teaching of CRE in public secondary schools in Nakuru sub-county
III. To establish the influence of learning and teaching resources on the use of cooperative learning approach in the teaching of Christian Religious Education in public secondary schools in Nakuru sub-county.
IV. To determine the influence of student ability to adapt to the learning environment on the use of cooperative learning approach in the teaching of christian religious education in public secondary schools in Nakuru sub-county.

1.5 Research questions

The research questions included the following

i. How does teacher competence influence the use of cooperative learning approach in the teaching of C.R.E in public secondary schools in Nakuru sub-county?

ii. To what extent do student attitudes influence the use of cooperative learning approach in the teaching of C.R.E public secondary schools in Nakuru sub-county?

iii. How do learning and teaching resources influence the use of cooperative learning approach in the teaching of C.R.E in public secondary schools in Nakuru sub-county?

iv. To what extent does student ability to adapt to the learning environment influence the use of cooperative learning approach in the teaching of C.R.E in public secondary schools in Nakuru sub-county?

1.6 Significance of the study

The findings of this study are likely to help teachers of C.R.E to understand when to employ a given teaching methodology. The outcomes of the study may help the teachers of C.R.E to seek further educational qualifications and change their attitude in the teaching of C.R.E. Further, the outcomes may help school management improve facilities and increase learning teaching resources. The findings may also help teacher educators to sensitize student teachers on factors that are likely to determine the use of a given teaching methodology. The study may also help school principals and head teachers to adapt school policies that can allow the use of cooperative learning approaches. The

study may help curriculum developers for teacher education to include factors that determine the use of teaching methodologies in teacher education curriculum. Findings may also add knowledge to what is already available on cooperative learning approaches if factors that can determine its use in teaching that are being investigated are proven true.

1.7 Limitations of the study

While the study involved all the secondary schools within Nakuru sub-county, the personality of students and their ability to adapt to learning may differ. The teaching learning resources in schools were also not in the same category since the schools are classified as national, county and sub-county. Thus the results of this study were generalized to schools of all categories, irrespective of their unique challenges or privileges.

1.8 Delimitation of the study

Public secondary schools within Nakuru sub-county were included in the study population. Teachers and students of CRE were eligible respondents. While this study did not delve into detailed methodologies of each subject, it investigated the factors that influence the use of various cooperative learning approaches in the teaching of the subject within Nakuru sub-county.

1.9 Assumptions of the study

The following assumptions were made in the study:

While carrying out the study the researcher assumed the following:

I. Sample population represented the target population well and that data collection instruments were valid and reliable based upon the pilot of the study.

II. That the respondents had adequate awareness and knowledge on cooperative teaching methods

1.10 Definition of significant terms

The following were the significant terms as used in the research;

Adaptation refers to the process of changing to fit some purpose or situation. In this study it will refer to students' ability to fit in their learning environment.

Attitude refers to learned behavior to respond positively or negatively to CRE or concepts of CRE they will include opinions or feeling towards the teaching of CRE and approaches used in its teaching.

Cooperative learning approach refers to a method of teaching and learning in which students help one another learn in small cooperative groups while teachers play the role of facilitation

Conventional teaching-learning methods refers to teaching methods in which teachers maintain control of the subject matter, when and how it should be learnt while students remain passive recipients' of knowledge

Teaching and learning resources refers to all that makes teaching using cooperative learning approach comfortable and possible e.g. CRE course books, charts containing religious information, reference books, bibles and other revision materials for CRE

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

In this chapter, relevant literature on the factor that may influence teacher use of cooperative learning approach during teaching/learning is reviewed. These factors include teacher competencies, students' attitude and ability to adapt to the teaching learning environment and teaching learning resources. Overviews of cooperative learning approach, implementation of cooperative learning, theoretical and conceptual framework of the study have been discussed.

2.2 Overview of cooperative learning and teaching approach

Slavin defines cooperative learning or peer assisted learning as working together in small groups to help each other learn (Slavin, 2006). Cooperative learning is a method of learning and teaching in which students form teams for structured activities to achieve a common goal. Students are individually accountable for their work and the work of the entire group. Cooperative learning represents a swift in educational paradigm from teachers' centered approach to a more student centered learning in small groups. Cooperative learning creates excellent opportunities for students to engage in problem solving with the help of the group members (Effadi, 2005).

Constructivist approaches use cooperative learning on the premise that students will discover and comprehend challenging concepts more easily if they can talk to each other about their problems (Slavin, 1997). Constructivists emphasize on the social nature of the learning and use of groups of peers to model effective ways of thinking, expose and

challenge each other's misconceptions. These are key elements of Piaget and Vygotsky in conceptions of cognitive change (Slavin, 1997). Constructivism is a theory of knowledge acquisition which asserts that knowledge is by learners through active involvement in the learning process (Asoko, Driver, Leach, 1994). They continue to argue that knowledge is not transmitted from the teachers to the learners but rather learners construct it. The ideas of constructivists' theory have major implications for educational practice (Kyriacou, 1997). Firstly, students are viewed as actively trying to make sense of their environment as it relates to cognitive structures, thus, teachers should ensure that learners are ready for new knowledge. Teachers should also use teaching and learning methodologies that promote learner involvement. Secondly, it provides a basis for selection of teaching strategies. They argue that methodologies that incorporate practical activities and group discussion are preferred.

Cooperative learning is suitable since it involves elements about how learners should learn (Kyriacou, 1997). Strategies of cooperative learning include;

a. Group investigation

It is a general classroom organization plan in which students work in small groups using cooperative inquiry, group discussions and cooperative learning projects. Students form own groups of two to six members (Slavin, 1997). They choose subtopics from a unit that the entire class is studying; the groups break their subtopics into individual tasks and carry out the activities that are necessary to prepare group reports. Each group then

makes a presentation of its findings to the entire class (Slavin,1997, Sharan and Sharan, 1992)

b. Teams Games Tournament (TGM)

The strategy uses the same teacher presentation and teamwork as in STAD, but replaces the quizzes with weekly tournaments in which students compete with members of other teams to contribute points to their team scores (Salvin,2006). Students compete at three-person "tournament tables" against others with similar past records. Winners at each table brig the same number of points to their teams. Low and high achievers have equal opportunities for success. They earn team points based on how well they do at their tournament tables (Iksan & Zacharia, 2006).

c. Student Team Achievement Division (STAD)

Learners are assigned to four member learning teams that are mixed in performance (heterogeneous). (Slavin, 1997). A teacher presents a lesson and students ensure that all team members have mastered the lesson through peer tutoring. At last all students take individual quizzes on the material at which time they may not help another. Points are given on the degree to which students can meet or exceed their performance. Points are summed up and a winning team may earn certificates (Slavin, 1994, 1997)

d. Jigsaw II

In jigsaw II, students work in four to five members team as in TGT and STAD. All students study common material such as books, chapter or short story. Each student however, receives a topic on which to become an expert. Students with the same topics meet in expert groups to discuss and after which they turn to their teams to teach what they have learned to their teammates. The students take individual quizzes which give team scores based on the improvement score system of STAD. Teams when they meet preset standards may earn certificates.

2 .3 Conventional methods of teaching

In the conventional methods, the teacher takes centre stage as he/she dominates the classroom. The learners rely on the teacher to make decisions on what should be learnt, when and how it should be learnt (Iksan & Zacharia, 2007). Iksan and Zacharia agree that this method of instruction works relatively well but it is not clear that the learners, learn at high conceptual level of thinking.

The following are the conventional methods used;

a. Lectures

The teachers provide instructions through oral explanation of concepts while students listen, observe and take notes with limited opportunities to ask questions (Githua 2002). Students understand a small percentage of the lecture content (Haller, C.R. Gallagher, V.J. Weldon, T.L and Felder, R.M (2002). Lecturers tend to be on the one end continuity with most teachers control, least students input, most destructive mode of instruction

(Daly, J. Gustar, F &Anita, V1990, Makini, 2003). People learn better when they are using as many senses as appropriate. Lecturers convey large amount of information permitted maximum teacher control of the learning process (Makini, 2003).

The weakness of lecture approach according to Slavin is that lectures lacks feedback to the instructor about students learning and students are passive than teachers (Slavin, 1995). Lectures emphasize learning by listening and not well suited to complex, detailed material. The teacher manages to cover a wide content in a given time and is not able to present information in logical order (Okere, 1996). It does not take into consideration the learning taking place. There is usually minimal student understanding of concepts discussed in lectures. Focus in lecture is usually on the teachers' presentation as much content as possible in an orderly way. With shift from transmission to transactional paradigms in education, much focus ought to be on how much learners are able to learn from themselves and with minimal role from the instructor (Okere, 1996). This study will investigate effects of CLA towards teaching of CRE.

b. Question and answer

The teacher introduces the lesson and asks probing questions while students answer the questions. The questions should be clear, purpose full, brief, asked in natural language and asked one at a time (Ciod & Brophy, 1995). They argue that the interaction time spent waiting for student responses and time spent on interacting with students during classroom instruction have significant implications to learning. It is used sparely by teachers for purposes of getting feedback from students.

c. Demonstration method

This involves the demonstration of a technique or a lesson to learners by an instructor or another learner. They could be attractive to learners in that it is an alternative to long and tedious explanations. It also allows the teacher to do what he or she is best at in teaching (Okere, 1996). The real problem with demonstration is that learners almost inevitably view them as a model and hence are tempted to imitate without fully thinking through the worth of the activity of soundness of the technique. In spite of the limitations, conventional methods of instruction continue to be embraced by most teachers.

Demonstration method is a practical display of a process which involves the showing of a process or the action involved in it. It is learning through imitation, whereby the teacher gives several demonstrations of the complete operation with explanation giving a clear picture of what pupils are expected to know at the end of the lesson. The teacher demonstrates elements which are followed by the pupils' practice of each element.

2.4 Teacher competencies and use of cooperative learning approach

Teacher competencies will include qualification and experience and both can influence teacher use of cooperative learning approach in that if he/she is trained in the use of the approach and has taught for a number of years they will implement in class. Gilles argue that a reluctance to embrace cooperative learning may be partly due to lack of understanding of how to use this pedagogical practice in their classrooms (Gilles, 2008). In a study of high school students' performance on a science-based learning activity, students performed better in those schools where teachers had been trained in how to establish Cooperative Learning activities in their curricular than in those schools where

teachers had not been trained. It is important that teachers understand how to embed into the classroom curricular to foster open communication and engagement between teachers students, promote cooperative investigation, problem-solving and reasoning and provide students with an environment where they feel supported and emotionally secure (Johnson and Johnson 2006; Roseth, Johnson & Johnson, 2008).

A reluctance to embrace cooperative learning may be partly due to the demands it places on curriculum organization and the personal commitment teachers need to sustain their efforts (Kohn, 1992). The teaching of C.R.E in Tanzania is ineffective due to lack of qualified teachers and lack of enough time to use instructional materials due to policies that require the completion of the syllabus within a specified time (Honge, 2011).

Cooperative learning groups are rare, because many educators are not well trained, often seek shorts cuts to quality group work, perceive time as barrier to its implementation and tend to assume that traditional classroom groups will suffice (Antil, Jenkins, Wayne & Vadasy, 1998). If cooperative learning has to be used successfully in classrooms, teachers need to be taught how to work with groups and lessons and tasks need to be well organized (Baines, Blatchford, Galton & Kutnick, 2003).

In a survey of exemplary teachers' actual a preferred use of cooperative learning, found that teachers are more likely to use Cooperative Learning when they have participated in staff development designed to provide them with the background knowledge and skills required to implement this approach to learning in classrooms. Gillies (2008) found that students demonstrated more complex thinking and problem solving skills, both in their

discourse and follow up learning outcomes, when their teachers had participated in professional development activities on how to establish cooperative learning in their classrooms. Thus both Lopata and Gillies highlight the importance of training teachers in the knowledge required to implement cooperative learning in their classrooms.

According to Hennessey & Donigi (2013) teachers require knowledge of cooperative learning features, terms and how this features faction to implement cooperative learning successfully in their practice. Teachers require a particular professional pattern language in order to use cooperative learning effectively. Bain, Lanceter & Zundans (2008) define pattern language as the terms used to express the models and practices that represent a field of professional practice.

2.5 Attitude of students and use of cooperative learning approach

Attitude is an index of an individual's thoughts and feelings about issues in the environment (Ajzen, 1998). Attitudes are crucial in understanding the way people perceive the world around them, as they determine what a person will see and hear. A of research conducted by Chemwei, (2003), Gitau, (2007) and Makini, (2006), on the effects of cooperative learning on students attitude in poetry, biology and mathematics, results indicated that students taught through the cooperative learning approach developed a positive attitude as opposed to those taught by conventional methods.

In similar researches conducted by Njoroge (2006), Saye &Abboth (2000) and Anowar Hossain (2012), results showed improvement in attitudes towards mathematics in comparison to those taught through conventional methods. This was in agreement with

Borich's (2004) findings that cooperative learning is intended to heighten students' interest and to encourage positive attitude and feelings towards the subject. An earlier study by Saye & Abboth (2000) found similar results where students learning through STAD had more positive attitude. Anowar's research on effects of cooperative learning on students' attitude toward mathematics showed improvement in attitude toward mathematics (Anowar Hossain 2012).

Cooperative efforts results in more positive attitude towards the tasks being completed and greater motivation to complete the task (Johnson & Johnson 1998). Oyaya and Njunguna (1999) found out that students attitude towards mathematics was negative and attributed the problem partly to teaching methods used. Further, research on group-oriented discussion methods has shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, self-confidence and leadership ability (Perkins and Saris, 2001; Yoder and Hochevar, 2005). Hunt, Haidet, Coverdale, and Richards (2003) examined student performance in team learning methods, finding positive learning outcomes as compared to traditional lecture-based methods. In contrast to these findings, a study by Barnes and Blevins (2003) suggests that active, discussion-based methods are inferior to the traditional lecture-based method.

2.6 Student ability to adapt to learning environment and use of cooperative learning approach

In a study on students' performance on a science based-learning activity, found that students performed better in those schools where students had been provided with opportunities to participate in their activities on a regular basis. (Johnson, 2008).This will improve their personality and improve their attitude to easily adapt to their learning environment. Hertz-Lazarowitz, (2008).Blatchford, Baines, (2003) argued strongly that if cooperative learning is to be used successfully in the classrooms, the context in which it is to be introduced needs to be prepared, students need to be taught the appropriate interactional skills and teachers need to be taught how to work with groups, and the lessons and tasks need to be well organized.

The student will need to be willing to work in small groups helping one another learn the content. According to Johnson and Johnson (2004) the students should work in small groups to enhance their learning. Cooperative learning creates excellence opportunities for student to engage in problem solving with help of group members (Effadi, 2005) there should be individual and group accountability (Slavin, 2006). Cooperative method of teaching is one of the most effective ways of arousing interest in students under the guidance of a teacher. Children learn a little by listening, a little more by watching but learn more by actually doing the piece of work. This method exposes the students to real life situation by finding facts and meaning of concepts (gaining firsthand information) by themselves. This method of teaching centers on assignment under thorough supervision

of the teacher. Students are given free hands to fulfill the requirement with the teacher giving guidance

2.7 Learning and teaching resources and use of cooperative learning approach

Hertz-Lazarowitz, (2008) emphasis the importance of preparing physical space for learning and teaching ensuring the learning tasks are challenging and engage students in higher-order thinking helping teachers to understand that they need to accept their role as producers of new classroom curricular and programs, and training students in social and academic skills they will need to negotiate their new learning environments. They recognize the importance of preparing the environment and individuals, if student in turn are to reap the benefits widely attributed to the cooperative learning approach.

A lecture is a talk or verbal presentation given by a lecturer, trainer or speaker to an audience. The teacher, as the authority figure, does most of the writing and talking (chalk and talk) with the pupils as mere passive recipients of information-listening and writing down a few notes and asking few or no questions (Nwokocha, 2008). A study conducted by Benson, Schroeder, Lantz, and Bird (2009) provides evidence that students may place greater emphasis on lecture material than on textbooks. Lecturing is not simply a matter of standing in front of a class and reciting what you know. The classroom lecture is a special form of communication in which voice, gesture, movement, facial expression, and eye contact can either complement or detract from the content. This study also aims at confirming the same and how it affects performance of pupils and students at KCPE and KCSE levels.

2.8 Executive summary of related literature

This chapter has discussed an overview of cooperative learning approach, teacher competence which includes level of training and experience, student ability to adapt with learning environment, teaching and learning resources which include space, CRE text books and other reference materials and student attitude towards the use of cooperative learning approach. The literature reviewed has shown out rightly that there is a significant relationship students performed better in those schools where teachers had been trained in how to establish Cooperative Learning activities in their curricular than in those schools where teachers had not been trained. It is important that teachers understand how to embed into the classroom curricular to foster open communication and engagement between teachers students, promote cooperative investigation. The pressure to pass examinations also ascertains to skills imparted towards this course. A gap therefore arises here in that there is no study that links how these skills acquired in one level of learning translates to another level of learning in all the subjects. A research conducted by Chemwei, (2003), Gitau, (2007) and Makini, (2006), on the effects of cooperative learning on students' attitude in poetry, biology and mathematics, results indicated that students taught through the cooperative learning approach developed a positive attitude as opposed to those taught by conventional methods. Studies on teaching methodologies have also focused on learners' preference at the expense of other key stakeholders like the teachers.

2.9 Theoretical framework

The Piaget theory of constructivism, which guided this study, suggests that learners construct knowledge out of their experiences, and is often associated with pedagogic methodologies that promote active learning. It emphasizes the need to actively involve the learner in the learning process, as opposed to previous approaches where the instructor was responsible for teaching, with the learner playing a passive (receptive) role (Tobias & Duffy, 2009). According to this approach, teachers have to adapt to the role of facilitation and not of teaching (Bransford, 2000), in order to help the learner get his or her own understanding of the content.

The theory holds that learning is built upon knowledge that a student already knows. This prior knowledge is called schema. Because is filtered through preexisting schema, constructionists suggest that learning is more effective when a learner is actively involved in the learning process. (Kimani, 2012) According to this theory learners are not “tabula ras” and knowledge cannot be imparted without the learner making sense of it according to his or her current perceptions. Therefore learners learn best when thinking is allowed to construct a personal understanding based on experience. The main goal of constructionist teaching is that students learn by giving them training to take initiative from their own experiences. (Kimani, 2012) this research will investigate school factors that can determine the use of cooperative learning approaches that have been emphasized for high student achievement.

2.9 Conceptual framework

The conceptual framework shows the relationship between cooperative learning approaches and factors that influence its use in the teaching of CRE the benefits , Conceptual framework in this study is informed by piaget theory of constructivism, which guided this study, suggests that learners construct knowledge out of their experiences, and is often associated with pedagogic methodologies that promote active learning. Dependent variable for the study was teachers use of cooperative learning approach while the independent variables are the school based factors which includes teachers competences, attitude of students, teaching and learning approach and students ability to adapt

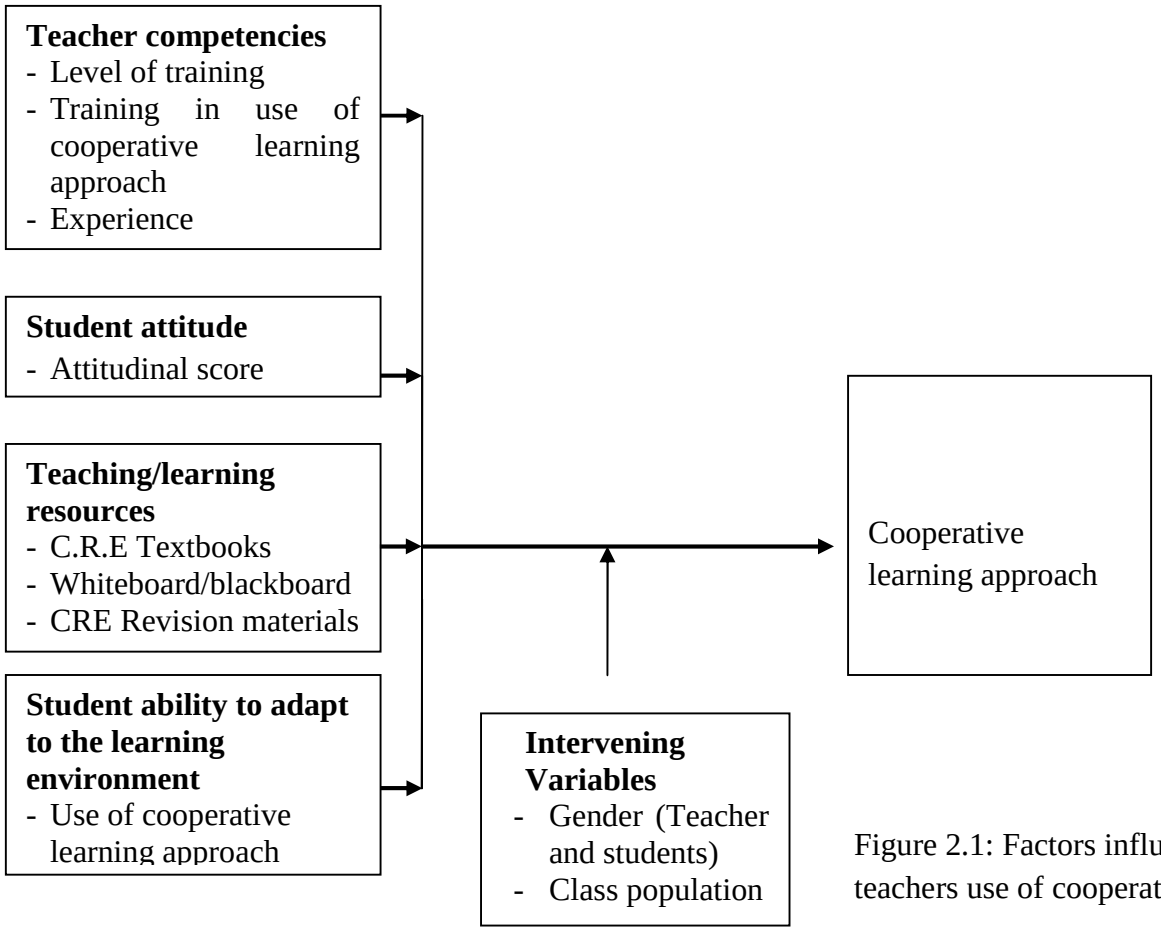


Figure 2.1: Factors influencing teachers use of cooperative

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the following sections, research design, target population, sample and sampling procedure, research instruments, validity and reliability of research instruments, data collection procedures, data analysis techniques and ethical considerations.

3.2 Research design

The study was based on a descriptive survey research design where data and information was gathered from both primary and secondary sources. Secondary sources comprised of review of relevant literature. The primary data were collected from carefully sampled respondents during the field survey. Orodho (2002) posits that descriptive survey design is the most suitable method for collecting information about people's opinions on various issues that affect them. This study fits this design because it relied on the opinions of the respondents. Survey research design entailed the use of either questionnaires or interviews. This study relied on the use of questionnaires. The respondents, who are teachers and of CRE in the target schools, responded to closed questions. Written surveys allowed the respondent the greatest latitude in pace and sequence of response, and are best suited in eliciting confidential information. Though the schools were far apart, written surveys generally require minimum resources in terms of costing, time and staff.

3.3 Population of the study

The target population of the study included the 27 secondary schools within Nakuru sub-county, 135 teachers of CRE and 1080 form three students of CRE.

3.4 Sample size and sampling procedures

The study used random sampling technique to ensure equitable representation of schools irrespective of their category, resources, student population or number of teachers of CRE. Ten schools were randomly selected from the 27 for the survey and 42 teachers of CRE from the selected schools were respondents. According to Mugenda and Mugenda (2003) a sample of between 10% and 30% of the target population is acceptable. Given the number of secondary schools stood at 27 in Nakuru Sub-County, and that the number of teachers of C.R.E was 135, a sample size of 42 was targeted. This ensured that each school got at least 4 respondents. Schools with more than 4 teachers or 5 teachers were slotted for purposes of capturing more divergent views.

Category	**Target Population**	**Sample**	**%**
Schools	27	9	30.0
Teacher of CRE	135	42	30.0
Students	1080	375	30.0
Total	1,242	375	30.0

3.5 Research instruments

The researcher developed and used pretested closed ended questionnaires for teachers and students of CRE to collect data. According to Orodho (2002) and Kothari (2003) questionnaires are free from bias, cost effective and give respondents adequate time to give well thought answers. The questionnaire contained closed ended questions to reduce wide variations of responses hence ensuring consistency and easy comparison.

3.6.1 Questionnaires for teachers and students

The researcher will use both open and close ended type of questions. This instrument makes it possible for the researcher to reach a large number of respondents who are able to read and write independently. Close ended questions will be used for the purpose of getting specific information by providing the respondents with all possible alternatives from which the respondents select the answer that best describes their situation. The open ended items will enable the respondents to have a chance to think beyond the researcher's scope and by so doing the researcher will get more useful information.

The questionnaires will consist of four sections, namely A, B, C and D. Section A will include demographic characteristics of the respondents. This is general information on the background of the respondents. Section B will consist of items that seek to gather information about the teacher's competencies in cooperative learning approaches. The items in this section will be in a likert scale with a four-point ranging from SA= Strongly Agree, A= Agree, D = Disagree and SD = Strongly Disagree. This has been adopted from Rosernberg attitude scale (Rosenberg, 2010). Section D of the questionnaire will be

made of general questions seeking school based factors influencing teacher's use of cooperative learning approach. Finally suggestions that will address these challenges will be sought.

Two sets of questionnaires to cater for the different categories of the respondents were used. These are:

(a) Questionnaires for students

(b) Questionnaire for the teachers

3.6 Validity of research instruments

Validity is the degree to which an instrument measures what it is supposed to measure (Kothari 2003). After designing questionnaires for the respondents the researcher ensured that both content and construct validity of the instruments was obtained by seeking expert advice from supervisors and other colleagues in the Department of Educational Administration and Planning. Secondly, the researcher clarified the questions for easy understanding by the respondents.

3.7 Reliability of the instruments

Mugenda and Mugenda (2003) define reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trials. The researcher utilized test-retest reliability. The retest occurred one week after the first test. The researcher used results from test one and test two to work out the correlation coefficient

to indicate the stability of the questionnaire items. The researcher utilized Pearson's product moment formula.

$$r=\frac{N\sum XY-(\sum X)(\sum Y)}{\sqrt{\{[N\sum X-(\sum X)][N\sum Y-(\sum Y)]\}}}$$

Where r-The Pearson's correlation coefficient

X-the result from the first test

Y-the result from the second test

N-the number of observations

The researcher relied on the coefficient value of 0.8. This is according to Mugenda and Mugenda (2003).

3.8 Data collection procedures

The formulated questionnaire at the end of this proposal (appendix 1) was used to gather data from the teachers of CRE within Nakuru Sub-County. The researcher introduced herself and explained the reason for carrying out the research. This was meant to establish a rapport between the researcher and the respondents. The questionnaires were then distributed to the respondents to fill out after a brief explanation by the researcher. The researcher agreed with the respondents about the time limit for filling out the questionnaires. After expiry of the time limit, the researcher collected the questionnaires from the selected schools for data analysis. The researcher maintained the contacts of the respondents until after analysis of the data.

3.9 Data analysis techniques

After collection of data, qualitative data were organized into the various categories and analyzed thematically. Quantitative data were analyzed using descriptive and inferential statistics. Statistical Package for Social Sciences (SPSS) and other computer packages such as excel were used for data analysis.

3.10 Ethical considerations

The administration of the questionnaires started upon approval of this proposal by the supervisors of the School of Education; University of Nairobi. The researcher sought permission to conduct research from the National Commission for Science Technology and Innovation (NACOSTI) to conduct research and an introductory letter from the University of Nairobi. The researcher utilized the two to get permission from principals of the sampled schools where the research was conducted. The researcher visited the sampled schools for the research in Nakuru sub-county with the letters. The researcher ensured that she got consent from the respondents before collecting data. The researcher tried as much as possible to maintain objectivity and assure respondents of anonymity by ensuring that they do not write their names anywhere on the questionnaire.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

The purpose of this study was to investigate, school based factors that influence teacher use of cooperative learning in teaching CRE in secondary schools within Nakuru Sub-County. The following research objectives were formulated for the study; to determine the influence of teacher competence on the use of cooperative learning, to investigate the influence of student attitude on the use of cooperative learning approach in the teaching of CRE, to establish the influence of learning and teaching resources on the use of cooperative learning approach in the teaching of Christian religious education in secondary school and to examine the influence of student ability to adapt on the use of cooperative learning approach in the teaching of CRE in secondary school in the teaching of CRE in secondary school. Descriptive and inferential statistics were used to analyses the data and results were presented in form of frequency tables and figures.

4.2 Questionnaire return rate

The sample population of the study included the 42 teachers of CRE and 324 students of CRE. The questionnaires were administered in person to the teachers and students. Teachers in the 9 secondary schools in Nakuru Sub County returned 40 questionnaires out of the 42 administered. The students returned 270 questionnaires out of 334 administered. The average return rate was (89.305%) as shown in Table 4.1.

Table 4.1

Questionnaire return rates

Respondent	Administered	Returned	%
Teachers	42	40	95.22
Students	120	100	83.39
Total	162	140	89.305

4.3 Demographic characteristics of the respondents

The study sought demographic information about respondents which included their gender, education level and years of experience in teaching. This background information of key respondents was imperative to confirm whether the research reached the targeted audience and whether or not the research captured the information it effectively sought.

Table 4.2:

Demographic background of teachers

Variable	Type	Frequency	Percentage
Gender	Male	24	60
	Female	16	40
	Total	**40**	**100**
Years of experience in teaching	0 to 1 Years	6	15.0
	2-5 Years	6	15.0
	6-15Years	8	20.0
	16-24 Years	9	23.4
	25 Years and Above	**9**	26.6
	Total	**40**	**100.0**

In the Table 4.2 among the teachers, most of teachers accounting to 60% were male while 40% were female teachers. In terms of Years of Experience in Teaching CRE**,** most

teachers indicated that they possessed an experience of between 16-24 years as shown by 26.6%, and the lowest being 1-5 years of experience as indicated by 20.0% of the respondents. Therefore on average teachers possessed 15 years' experience, which averages that teachers had adequate experience to teacher the CRE Subjects in various public secondary schools.

Table 4.3:

Teaching using cooperative approach

Subject other than CRE that sampled teachers teach	Languages	6	8.5
	Geography	16	30.0
	History	18	62.5
	Totals	**40**	**100.0**
Composition of class in terms of ability	Above average ability students	8	20
	Average ability students	16	40
	Below average ability students	8	20
	Mixed ability	8	20
	Totals	**40**	**100.0**
Size of class	Less than 18 students	6	16.0
	18 to 24 students	8	20.0
	25 to 29 students	4	10.0
	30 to 34 students	8	20.0
	More than 34 students	10	22.0
	Totals	**40**	**100.0**
Number of years implementing cooperative	None	7	18.0
	Less than 2 Years	12	30.0

learning	Between 2 and 4 years	8	20.0
	Between 4 and 8 years	5	12.0
	More than 8 years	8	20.0
	Totals	**40**	**100.0**

The research established that most teachers who were teaching CRE were also teaching other subjects and mostly humanities and languages as represented by 82.5%. The study similarly sought from teachers the composition of the CRE class in terms of student's academic ability where most students are average ability as indicated by 40.0% of the teachers and the other belonged to other categories; either below average or above average ability. The study found that most of schools in the study area have a class size of 18-24 students as accounted for by 30% of the respondents and a smaller number of the teachers indicated that they teach a class of more than 34 students. This finding implies that most schools have a good teacher to student's ratio. The pupil–teacher ratio is one measure of assessing progress towards education for all.

The student/teacher ratio measures the number of students per teacher. It reflects teacher workload and the availability of teachers' services to their students. The lower the student/teacher ratio, the higher the availability of teacher services to students. The student/teacher ratio has implications not only for the cost of education, but also for the quality. The study similarly found that most teachers had less than 2 years' experience in implementing cooperative learning method as can be shown by 30.0% of the teachers and only 12.0% with experience of more than 8 years which implies that most teachers have little experience implementing cooperative teaching method in the study area.

Table 4.4

Extent of use of cooperative learning method in teaching CRE

In this section the researcher was interested in knowing about feeling of students about learning CRE in small groups of students helping one another, otherwise called cooperative learning method. The findings are as shown in Table 4.3

The table shows cooperative approaches used by teachers in teaching C.R.E

Methods of cooperative learning	Teams Games Tournament (TGM)	14	33.4
	Student Team Achievement Division (STAD)	18	46.6
	Jigsaw	8	20.0
	Totals	**40**	**100.0**
Amount of workshop training in cooperative learning	None	4	12.0
	Less than a full day	12	30.0
	Between 1 and 2 days	14	33.0
	Between 3 and 6 days	8	10.0
	More than 6 days	41	5.0
	Totals	40	**100.0**
Type of follow-up support in cooperative learning	None	4	10.0
	With Trainer	8	20.0
	With Fellow teachers	16	40.0
	With administrator(s) (e.g., principal, curriculum consultant)	14	30

The study also established amongst the various approaches of cooperative learning methods, most teachers indicated that they implement a method referred to as student team achievement method as can be seen by 46.6% of teachers, followed by team game or tournament method as can be shown by 33.4% of the teachers and least the jigsaw method as shown by 20.0% of the teachers. The amount of workshop training in cooperative learning method that teachers have gone though in terms of duration of a single session it was established that most session take a session of either less than full day or between 1 and 2 days as accounted by combination of 63.0% which indicate that there in inadequate time allocated for to teachers to train teaching methods. At the same time the study sought to establish from teachers the type of follow-up support in cooperative learning and found that such follow-ups where available were between fellow teachers as indicated by 40.0 % of the teachers and the least were with the trainers as can be seen only by 20.0% of the teachers

4.5 Teachers Competencies on use of cooperative learning approach to teach CRE

The first objective of the study was to determine the influence of teacher competence on the use of cooperative learning approach to teach CRE subject in public secondary schools in Nakuru sub-county. The level of competence of teachers to use cooperative teaching method was measured by use of 5 level likert scales with highest level being 5: Strongly Agree, 4: Agree, 3: Undecided; 2: Disagree and lowest being Strongly Disagree. The findings are as shown in Table 4.5

Table 4.5 :

Teachers competencies in the use of cooperative learning approach

The assessment competencies included here are the knowledge and skills critical to teachers teaching in the classrooms by establishing standards for teacher competence in student assessment.

The table shows teachers views on use of cooperative learning approach

Teachers Competencies	**5 -SA**		**4-A**		**3-N**		**4-D**		**5-SD**	
	F	**%**	F	**%**	F	**%**	F	**%**	F	**%**
Training Teachers to use cooperative method make it successful	17	42.6	3	8.1	11	26.3	6	15.2	3	7.7
I find cooperative learning too difficult to use successfully	22	55.5	8	20.5	7	16.9	2	6.9	1	0.2
I understand cooperative learning well enough to use it successfully	20	51.1	9	17.3	8	20	2	4.8	3	6.7
It is not easy to use cooperative without proper training	2	5.4	5	12.7	13	33.2	8	20.3	11	28.4
I find that cooperative learning is too difficult to implement successfully	9	23.6	10	26.5	16	40.7	2	4.6	2	4.6
My training in cooperative learning has not been practical enough for me to implement it successfully	2	25.4	5	22.7	16	33.2	8	20.3	8	28.4
I find that cooperative learning is too difficult to implement successfully	9	23.6	10	26.5	16	40.7	2	4.6	2	4.6

In the Table 4.8 the research sought to establish teachers views on ccompetencies in the use of cooperative learning approach to teach CRE Subject. The findings show that majority of teachers accounting to 50.7% either strongly agree or agree that training tteachers to use cooperative method make its' use more successful, however most of the teachers indicated that the training they had received to use cooperative learning approach was not adequate for its effective use as shown by 50.1% , While 40.7% were undecided. Similarly the study found that most teachers accounting to 68.4 % either strongly agreed or agreed that they find cooperative learning too difficult to use successfully. Regarding the practicality of cooperative teaching approach from teachers point of view it was established that **most** teachers indicated that the training teachers to use cooperative approach has not been practical enough for them to implement it successfully as shown by 52.0 % of teachers. The teachers also agreed that they find cooperative learning too difficult to implement successfully and to use as it takes too much time and effort as shown by 48.2% as they also strongly agree that use of cooperative training is not easy to use cooperative without proper training as shown by 50.1%.

From the finding it was deduced that teachers are aware that training is necessary if use of cooperative approach is to be successful. If cooperative learning has to be used successfully in classrooms, teachers need to be taught how to work with groups and lessons and tasks need to be well organized (Baines, Blatchford, Galton &Kutnick, 2003). Teachers competencies in this case includes teachers training to use, qualification and experience and both can influence teacher use of cooperative learning approach in that if

he/she is trained in the use of the approach and has taught for a number of years they will implement in class. Cooperative learning groups are rare, because many teachers are not well trained and often seek shorts cuts to quality group work, perceive time as barrier to its implementation and tend to assume that traditional classroom groups will suffice (Antil, Jenkins, Wayne & Vadasy, 2010).

Table 4.6 :

Students view of competencies of teachers in the use of cooperative learning approach

The assessment competencies included here are the knowledge and skills critical to teachers teaching in the classrooms by establishing standards for teacher competence in student assessment.

Competencies	**5–SA**		**4-A**		**3-U**		**2-D**		**1-SD**	
	F	**%**	F	**%**	F	**%**	F	**%**	F	**%**
Our teachers have adequately trained/equipped us on interactional skills	27	10	93	34.4	94	34.7	51	19.0	31	11.5
Our teacher understands working in small groups and assists us through to work in small groups	3	1.0	161	59.7	42	15.4	31	11.5	34	12.7
The teacher remains in class and enjoys teaching C.R.E through small group tasks	19	7.1	100	37	99	36.5	20	7.3	33	12.1
The teachers create a favorable learning environment that allow learner centred classrooms	40	14.8	117	43.4	89	32.8	12	4.4	12	4.6

Table 4.5 show the analysis of students views regarding ccompetencies of their teachers to use cooperative learning approach to teach CRE Subject. The study found that most students strongly agreed that their teachers have adequately trained/equipped students on interactional skills as shown by 44.4% who either agreed or strongly agreed. However, 34.7% of the students could neither agreed nor disagreed, which show that students believe that their teachers are fully trained or competent to use cooperative approach. The views of the students differ from teachers who felt that they are not adequately trained to use cooperative approach fully as shown in Table 4.4.

The study also established that most students accounting to half (59.7%) similarly agreed that their teachers create a favorable learning environment that allows learner centred classrooms. Most students strongly agreed that current curriculum allows adequate time for face to face interaction as shown by 56.0% of the respondents. At the same time most students agreed that most teachers remain in class and enjoys teaching C.R.E through small group tasks as shown by 70.0% of the respondents. Most students disagreed with the statement that their teacher disappears immediately students begin group activities as shown by 65.0%. Similarly most of students strongly agreed that teachers encourage the students to work in teams as shown by (58.0%) of respondents.

From the findings it was deduced that students find cooperative approach to be favorable and their teachers to be competent to use the method. Views of the students differs from the teachers perspective in that teachers find that currently they would prefer more training to use cooperative learning approach. Gillies (2008) found that students demonstrated more complex thinking and problem solving skills, both in their discourse

and follow up learning outcomes, when their teachers had participated in professional development activities on how to establish cooperative learning in their classrooms. Thus both Lopata and Gillies highlight the importance of training teachers in the knowledge required to implement cooperative learning in their classrooms

Table 4.7 :

Relationship between teacher use of cooperative method and competences by Pearson Correlation

Training level	Use of Cooperative Teaching Method in Teaching CRE
Pearson Correlation	.890
Sig. (2-tailed)	0.04
N	40

Relationship between extent of teachers' use of cooperative method and teachers level of competences using Pearson Correlation,, (r) where the level of use is the dependent variable while competences was measured by training level of teachers. Pearson correlations are useful because it provides an objective measure of the importance of an effect. The results from Table 4.6 indicate that there was statistically significant ($p < 0.05$) relationship between extent of teachers' use of cooperative method and their competences in terms of training in that the more teachers were trained the more they were using cooperative teaching method to teach CRE in their respective schools . Rate of use of cooperative method increased by 89% with a unit increase in training of teachers as measures of competences of teachers. In a study of high school students' performance on a science-based learning activity, students performed better in those

schools where teachers had been trained in how to establish Cooperative Learning activities in their curricular than in those schools where teachers had not been trained.

It is important that teachers understand how to embed into the classroom curricular to foster open communication and engagement between teachers students, promote cooperative investigation, problem-solving and reasoning and provide students with an environment where they feel supported and emotionally secure (Johnson and Johnson 2006; Roseth, Johnson & Johnson, 2008). A reluctance to embrace cooperative learning may be partly due to the demands it places on curriculum organization and the personal commitment teachers need to sustain their efforts (Kohn, 1992). The teaching of C.R.E in Tanzania is ineffective due to lack of qualified teachers and lack of enough time to use instructional materials due to policies that require the completion of the syllabus within a specified time (Honge, 2011).

4.5 Teachers and students attitudes and use of cooperative learning approach to teach CRE

The second objective of the study was to determine students attitudes towards use cooperative according and how it influence teachers' use of cooperative learning approaches in teaching CRE in secondary schools in Nakuru Sub-County. The level of attitude of teachers or students was measured by use of 5 level likert scales with highest level being 5: Strongly Agree, 4: Agree, 3: Undecided; 2: Disagree and lowest being Strongly Disagree. The basic assumption behind attitude scales is that it is possible to uncover a person's internal state of beliefs, motivation, or perceptions by asking them to

respond to a series statements (Fraenkel and Wallen, 1996). Individuals indicate their preference through their degree of agreement with statements on the scale. Items containing these statements are constructed with three common response formats: dichotomous agree/disagree, semantic-differential, and Likert formats (Crocker and Algina, 2008).

Table 4.8:

Views of teachers about student attitudes towards cooperative learning and how it influence cooperative learning approach

Teachers Attitude	**5 -SA**		**4-A**		**3-U**		**2-D**		**1-SD**	
	F	**%**	F	**%**	F	**%**	F	**%**	F	**%**
I prefer using familiar teaching methods over trying new ones	10	26.9	5	13.6	15	37.2	4	11.1	5	11.3
Cooperative learning holds bright students back	15	36.7	8	21.1	2	5.2	6	15.4	8	21.5
I find cooperative learning too difficult to use successfully	11	26.3	17	41.3	4	9.4	5	11.5	5	11.5
Cooperative learning places too much emphasis on developing students' social skills	20	50.1	6	15	11	27.6	2	6.9	2	0.4
Implementing cooperative learning requires a great deal of effort	20	51.1	16	39.9	3	0.6	3	0.6	3	7.7
Engaging in cooperative learning enhances students' social skills	5	14	8	20.7	10	25.9	7	19.6	7	19.8
Implementing cooperative learning requires a great deal of effort	7	18.6	191	39.9	127	26.5	35	7.3	3	7.7
Engaging in cooperative learning enhances students' social skills	13	31.7	9	21.5	6	15.7	92	19.2	5	11.9

The level of attitude of teachers was measured by use of 5 level likert scale with highest level being 5: Strongly Agree, 4: Agree, 3: Undecided; 2: Disagree and lowest being Strongly Disagree. The basic assumption behind attitude scales is that it is possible to uncover a person's internal state of beliefs, motivation, or perceptions

The study sought to establish teachers' attitudes towards use of cooperative learning approach where the comments are as follows; From analysed data it is clear that most teachers considers cooperative learning as new unfamiliar method of teaching as opposed to other methods that are used in teaching. This is as shown by 40.5% though 37.2% of teachers who participated in the study could neither agreed nor disagreed. It emerged from the analyzed data that most teachers think that cooperative learning holds bright students back as can be seen by 57.8% of the teachers in schools focused for this study. Another observation that emerged from the study was that most teachers attitude towards cooperative learning is that it places too much emphasis on developing students' social skills more than academic achievement and that cooperative learning gives too much responsibility to the students more than they should which interferes with goals of academic performance as the core goal of schooling as shown by 51.1% or 50.1% of the teachers.

Regarding the effort needed to implement cooperative learning approach the study found that majority (91%) of teachers either strongly agreed or agreed that too much effort is needed to make cooperative approach to be successful. The study also found that most teachers strongly agreed that cooperative learning approach foster positive students'

attitudes especially the social aspect as shown by 57.7% of the respondents. Study also found that most teachers strongly agreed that implementing cooperative learning takes too much preparation time as well as that cooperative learning gives too much responsibility to the students as shown by 53.2% as well as 59.5%. From the study it was deduced that teachers seems to have mixed attitude towards use of cooperative learning approach with most of them associating the method with developing students social skills, at the expense of academic since they indicate that it require too much effort to implement and it give too much responsibility to students. The finding differ from similar researches conducted by Njoroge (2006), Saye &Abboth (2000) and Anowar Hossain (2012), results showed improvement in attitudes towards mathematics in comparison to those taught through conventional methods. This was in agreement with Borich's findings that cooperative learning is intended to heighten students' interest and to encourage positive attitude and feelings towards the subject.

Table 4.9 :

Attitudes of students towards cooperative learning

Students Attitude	**5-SA**		**4-A**		**3-U**		**2-D**		**1-SD**	
	F	**%**	F	**%**	F	**%**	F	**%**	F	**%**
Students with high academic ability feel slowed	30	26.9	14	13.6	37	37.2	11	11.1	11	11.3
Some of my colleagues are shy and find it difficult to contribute to the group tasks	36	36.7	21	21.1	5	5.2	15	15.4	21	21.5
As students we are always willing to share knowledge	25	26.3	41	41.3	9	9.4	11	11.5	11	11.5

Individuals indicate their preference through their degree of agreement with statements on the scale. Items containing these statements are constructed with three common response formats: dichotomous agree/disagree, semantic-differential, and Likert formats (Crocker and Algina, 2008

The findings in Table 4.8, study sought to establish the attitudes of students towards cooperative learning where the findings were as follows; most students agreed that students with high academic ability feel slowed by 40.5% of students, while 37.5% could neither agree or disagree ,Regarding contributing to the group during sessions most students agreed as shown 36.7% together with 21.1% that some of their colleagues are shy and find it difficult to contribute to the group tasks, although at the same time most of students agree that they are always willing to share knowledge and help one another understand concepts as shown by 67.6% of the students.

From the findings in the section it can be deduced that students have positive attitude towards cooperative learning approach and are ready to share amongst themselves although they acknowledge that cooperative learning approach slow down some students who especially have high academic capability .Attitude is an index of an individual's thoughts and feelings about issues in the environment (Ajzen, 1998). Attitudes are crucial in understanding the way people perceive the world around them, as they determine what a person will see and hear. A research conducted by Chemwei, (2003), Gitau, (2007) and Makini, (2006), on the effects of cooperative learning on student's attitude in poetry, biology and mathematics, results indicated that students taught through the cooperative

learning approach developed a positive attitude as opposed to those taught by conventional methods.

Table 4.10

Relationship between extent of teachers' use of cooperative method and students attitude using pearson correlation

Attitude of teachers to use cooperative teaching	**Use of Cooperative Teaching Method in Teaching CRE**
Pearson Correlation	.800
Sig. (2-tailed)	0.04
N	40

The relationship between the four remaining constructs, were examined by calculating the Pearson correlation coefficients (r) where the level of use is the dependent variable while students attitude on use of cooperative approach was measured by aggregate likert scale of their level of attitude score

Pearson correlations are useful because it provides an objective measure of the importance of an effect. The results as shown in Table 4.9 indicate that there was statistically significant ($p < 0.05$) relationship between extent of teachers' use of cooperative method and attitude score. Rate of use of cooperative method increased by 80% with a unit increase in positive attitude as shown by high score in the attitude scale. A of research conducted by Chemwei, (2003), Gitau, (2007) and Makini, (2006), on the effects of cooperative learning on students attitude in poetry, biology and mathematics,

results indicated that students taught through the cooperative learning approach developed a positive attitude as opposed to those taught by conventional methods. In similar researches conducted by NJoroge (2006), Saye &Abboth (2000) and Anowar Hossain (2012), results showed improvement in attitudes towards mathematics in comparison to those taught through conventional methods. This was in agreement with Borich's findings that cooperative learning is intended to heighten students' interest and to encourage positive attitude and feelings towards the subject.

4.7Teaching and learning resources per teachers perspective

The third Objective of the Study To establish the influence of learning and teaching resources on the use of cooperative learning approach in the teaching of C.R.E in public secondary schools in Nakuru Sub-county. The view was sought from teachers and students. The response of teachers and students was measured by use of 5 level likert scale with highest level being 5: Strongly Agree, 4: Agree, 3: Undecided; 2: Disagree and lowest being Strongly Disagree. The findings are in Table 4.11 and 4.12

Table 4.11:

Teachers Views on teaching and learning resources effect on cooperative learning

Teaching and Learning Resources	5 –SA		4-A		3-N		2-D		1-SD	
	F	%	F	%	F	%	F	%	F	%
It is impossible to implement cooperative learning without adequate learning materials	9	23.6	11	27.8	16	41.3	3	7.1	1	0.2
The physical setup of my class room is an obstacle to use cooperative	8	21.1	11	26.7	15	37.6	6	14.4	1	0.2

The findings in Table 4.10 sought to establish teachers views on teaching and learning resources influence on cooperative learning approach where the study established from majority of teachers (51.4%), that, it is impossible to implement cooperative learning without adequate learning materials as can be seen by 27.8% who agreed and 23.6% who strongly agreed. Regarding physical setup of classrooms which can necessitate use of cooperative learning approach the study found that most teachers (47.8%) also strongly agreed that the physical setup of class room is an obstacle to use cooperative approach as shown by 47.6% while 37.6 could neither agree nor disagree. Hertz-Lazarowitz, (2008) emphasis the importance of preparing physical space for learning and teaching ensuring the learning tasks are challenging and engage students in higher-order thinking helping teachers to understand that they need to accept their role as producers of new classroom curricular and programs, and training students in social and academic skills they will need to negotiate their new learning environments. They recognize the importance of preparing the environment and individuals, if student in turn are to reap the benefits widely attributed to the cooperative learning approach.

Table 4.12:

Students views on teaching and learning resources effect on cooperative learning

Teaching and Learning	5 –SA		4-A		3-N		2-D		1-SD	
	F	%	F	%	F	%	F	%	F	%
It is impossible to implement cooperative learning without adequate learning materials	56	55.7	24	23.6	19	19.2	4	0.8	3	0.6
The physical setup of my class room is an obstacle to use cooperative	49	48.6	17	17.1	33	33.6	2	0.4	1	0.2

Similarly the analysed findings in Table 4.12 sought to establish students' views on teaching and learning resources influence on cooperative learning **in** the schools. The study established that majority of students shared the same sentiments with their teachers that it is impossible to implement cooperative learning without adequate learning materials as can be seen by 23.6% who agreed and 55.7% who strongly agreed. Regarding physical setup of classrooms which can necessitate use of cooperative learning approach the study found that most of students also share similar opinion with their teachers (65.7%) also strongly agreed that the physical setup of class room is an obstacle to use cooperative as shown by 33.6% could neither agree nor disagree.

Table 4.13 :

Relationship between teachers' use of cooperative and teaching and learning resources

The relationship between the four remaining constructs, were examined by calculating the Pearson correlation coefficients (r) where the level of use is the dependent variable while Quantity of teaching and learning materials

Quantity of teaching and learning materials	Use of Cooperative Teaching Method in Teaching CRE
Pearson Correlation	.700
Sig. (2-tailed)	0.04
N	40

Pearson correlations are useful because it provides an objective measure of the importance of an effect. The results in Table 4.13 indicate that there was statistically significant ($p < 0.05$) relationship between extent of teachers' use of cooperative method and their availability of teaching and learning materials within the precinct of the school in that the more teaching and learning materials were available the more teachers were found to use cooperative teaching to teach CRE in their respective schools . Rate of use of cooperative method increased by 70 % with a unit increase in utilization of teaching and learning resources by teachers. Hertz-Lazarowitz, (2008) emphasis the importance of preparing physical space for learning and teaching ensuring the learning tasks are

challenging and engage students in higher-order thinking helping teachers to understand that they need to accept their role as producers of new classroom curricular and programs, and training students in social and academic skills they will need to negotiate their new learning environments. They recognize the importance of preparing the environment and individuals, if student in turn are to reap the benefits widely attributed to the cooperative learning approach.

4.8 Students ability to use cooperative according to teachers

The fourth objective was to investigate the influence of student ability to adapt to the learning environment on the use of cooperative learning approach in the teaching of C.R.E in public secondary schools in Nakuru Sub-county. The view was sought from teachers and students. The response of teachers and students was measured by use of 5 level likert scales with highest level being 5: Strongly Agree, 4: Agree, 3: Undecided; 2: Disagree and lowest being Strongly Disagree. The findings are as shown in Table 4.13 and 4.14

Table 4.14

Students ability to use cooperative according to teachers

Student Ability to adapt	5 –SA		4-A		3-N		2-D		1-SD	
	F	%	F	%	F	%	F	%	F	%
My students presently lack the skills necessary for effective cooperative group work	15	14.6	42	42.0	30	29.6	9	8.6	8	8.2
The students are always eager to engage in peer assisted learning	14	13.8	41	41.3	36	35.9	8	8.4	3	0.6
Engaging in cooperative learning interferes with students' academic progress	14	14.0	15	15.4	24	24.4	32	32.4	14	13.8
If I use cooperative learning, my classroom is too noisy	15	15.0	40	40.1	26	26.7	11	11.3	7	7.1
My students do not like being challenged by peers	4	13.8	41	41.3	36	35.9	8	8.4	1	0.6
Cooperative learning gives too much responsibility to the students	14	14.0	15	15.4	24	24.4	32	32.4	13	13.8
My students are resistant to working in cooperative groups	14	13.8	41	41.3	36	35.9	8	8.4	3	0.6

Table 4.13 assess the students' ability to use ccooperative learning according to teachers, from the findings majority of teachers strongly agree that the students presently lack the skills necessary for effective cooperative group work as indicated 42% who agreed as well as 14.6% who strongly agreed. The study found that majority of teachers either strongly agreed or agreed that the students are always eager to engage in peer assisted learning as shown 55.1% of respondents. However most teachers disagreed with statement that engaging in cooperative learning interferes with students' academic progress as shown by 32.4% of respondents The study found that most of teachers agreed with assertion that using cooperative learning, make classroom to be noisy as shown by 40.1% of respondents . The study however found that most teachers revealed that their students do not like being challenged by their peers in which case this interferes with the use of cooperative learning as shown by 41.3% of the respondents. The study similarly revealed that cooperative learning gives too much responsibility to the students as shown by 32.4% of the respondents which end up affecting students ability to use the cooperative method as well as they strongly agreed that that students are generally resistant to working in cooperative groups as shown by 35.9% which also seriously cause conflict within such groups and therefore impeding success of cooperative learning method,

On positive note however, the teachers indicated that Peer interactions found within cooperative method help students obtain deeper understanding of the subjects and so can contribute to better learning outcomes as shown by 41.3% . From the findings it can be deduced that most teachers are of the opinion that cooperative learning method improve student's social aspect more than the academic aspect and so for the approach to be successful it may require more preparation and adaptation to specific learners need. This will improve their personality and improve their attitude to easily adapt to their learning environment. Hertz-Lazarowitz, (2008). Blatchford, Baines, (2003) argued strongly that if cooperative learning is to be used successfully in the classrooms, the context in which it is to be introduced needs to be prepared, students need to be taught the appropriate interactional skills and teachers need to be taught how to work with groups, and the lessons and tasks need to be well organized.

Table 4.15

Students ability to adapt to learning environment from the teacher

Students Ability to adapt	5-SA		4-A		3-U		2-D		1-SD	
	F	%	F	%	F	%	F	%	F	%
We have adapted fully to learning in small groups	11	26.9	5	13.6	15	37.2	4	11.1	5	11.3
Students understand and critically analyze concepts when learning in small groups	15	36.7	8	21.1	25	5.2	6	15.4	9	21.5
We enjoy learning CRE in small groups where we share ideas and assist one another to learn	11	26.3	17	41.3	45	9.4	5	11.5	5	11.5
The curriculum allows adequate time to face interaction	20	50.1	6	15	132	27.6	3	6.9	2	0.4

Table 4.14 assess the students ability to use cooperative teaching approach according to their opinion, from the findings majority of students could neither agree nor disagree that they have fully adapted to learning environment in small group as shown by 37.2% while combination of 22.4% either disagreed or strongly disagreed. Similarly most students agreed or strongly agreed that they have fully understand and can critically analyse concepts when learning in small groups as shown by 57.8% out of 100% , Similarly most students similarly strongly agreed or agreed as shown by 41.3% who agreed or 26.3% who agreed that they enjoy learning CRE in small groups where they share ideas and assist one another to learn and they also disagreed that curriculum allows adequate time to face interaction curriculum allows adequate time to face interaction. The findings show

that students and teachers differ significantly on their opinion of students ability to adapt to cooperative learning where teachers indicates that students have not adapted in use of cooperative method, students seems to enjoying learning CRE in small groups where they share ideas and assist one another to learn

Table 4.15 Relationship between the independent variables using Pearson Correlation

The relationship between the four remaining constructs, were examined by calculating the Pearson correlation coefficients (r) where the level of use is the dependent variable while ability to use measured by number of students actively using the method as opposed to other methods

Table 4.15

Relationship between the students ability and use of cooperative teaching method in teaching CRE

Students ability to adapt to use cooperative teaching	**Use of Cooperative Teaching Method in Teaching CRE**
Pearson Correlation	.800
Sig. (2-tailed)	0.04
N	40

The relationship between the four remaining constructs, were examined by calculating the Pearson correlation coefficients (r) where the level of use is the dependent variable while ability to use measured by number of students actively using the method as opposed to other methods.

Pearson correlations are useful because it provides an objective measure of the importance of an effect. The results in Table 4.15 indicate that there was statistically significant ($p < 0.05$) relationship between extent of teachers' use of cooperative method and students ability to adapt to use within the precinct of the school in that the more students possessed ability and motivation of using the method in the class the more they were available the more teachers were found to use cooperative teaching to teach CRE in their respective schools. Rate of use of cooperative method increased by 80% with a unit increase in Students ability to adapt to use cooperative teaching measured by indicators of absorptive capacity of students in class. Blatchford, Baines, (2003) argued strongly that if cooperative learning is to be used successfully in the classrooms, the context in which it is to be introduced needs to be prepared, students need to be taught the appropriate interactional skills and teachers need to be taught how to work with groups, and the lessons and tasks need to be well organized.

The student will need to be willing to work in small groups helping one another learn the content. According to Johnson and Johnson (2004) the students should work in small groups to enhance their learning. Cooperative learning creates excellence opportunities for student to engage in problem solving with help of group members (Effadi, 2005) there should be individual and group accountability (Slavin, 2006)

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter outlines the summary of research findings in line with the objectives of the study, draws out conclusions from the research findings and outlines the recommendations of the study as well as suggestions for further research.

5.2 Summary of the study.

The purpose of this study was to investigate school-based factors influencing teachers' use of cooperative learning approaches in teaching CRE in secondary schools in Nakuru sub-county. The study was based on a descriptive survey research design where data and information was gathered from both primary and secondary sources. Secondary sources comprised of review of relevant literature. This study relied on the use of questionnaires. The respondents, who are teachers and students' of CRE in the target schools, responded to closed questions. The target population of the study included the 27 secondary schools within Nakuru sub-county, 108 teachers of CRE and form three students of CRE.

Given the number of secondary schools stands at 27 within Nakuru sub-county, and that the number of teachers of C.R.E is 135 a sample size of 42 was targeted.

5.3 Summary of the Study

Analysis then looked at whether training was a significant factor in successful implementation. Firstly to examine the length and type of training as compared to the

frequency of use in lessons. This showed no significant pattern. The schools that had received the longest training reported different use, from about once per day, to in most lessons across the curriculum

The findings indicates that most of the students agreed lessons using cooperative learning method are well understood, friendly this is because teachers control class well and that teachers facilitates the groups very well and that students are able to retain more content. This impacted upon the staff and provided a clear vision for the school. Additional key aspects are the sensitive mix of monitoring and support to staff with one school using a positive and helpful observation for peer observation. Also the clear identification of skills and staged implementation through the school development plan and within medium term plans showed a positive impact. Involving pupils in identifying skills and setting targets has also been advantageous. Support to facilitators proved particularly beneficial, with a number or schools finding meetings for facilitators to share good practice and offer support, helpful. Schools using the *Success for* All strategy have also found external monitoring useful.

Factors that have hindered successful implementation have centred on the role of the Facilitator and where insufficient time has been provided through issues of time and cost, this has impacted on the level of use. In addition, the constant need to update and train due to staff turnover has caused difficulties. The importance of ensuring training meets the schools needs was particularly noted by some schools, and many found that initial external training was useful followed by in-house support.

All schools reported that in-house support has been the most effective form of professional development, clearly showing the vital role of the Facilitator

5.4 Conclusions

From the findings of the study, the following conclusions were made; Cooperative learning approaches creates excellent opportunities for students to engage in problem solving with the help of the group members. Cooperative learning approach as an instructional procedure depends on students helping one another to learn in small groups, which is likely to enhance student motivation and hence improve performance. Cooperative learning strategies employ many of the following characteristics and strategies in the classroom: positive interdependence, face-to-face interaction, individual accountability, social skills, and group processing. Positive interdependence is the belief that students are linked together with other students in such a way that one cannot succeed unless the group members also succeed.

For cooperative learning to be effective among students there is a need of effective social skills development given to students and cooperative learning strategies, students need to be properly instructed as to how to communicate effectively within a group setting. Educators must monitor the communication dynamics within each group. Teachers generally were found to lack necessary skills and training to offer cooperative learning properly, teacher qualification can determine teacher use of cooperative learning approach in that if he/she is trained in the use of the approach, they will implement in class. It is important that teachers understand how to embed into the classroom curricular to foster open communication and engagement between teachers students, promote

cooperative investigation, problem-solving and reasoning and provide students with an environment where they feel supported and emotionally secure

Support of adequate teaching and learning resources needed which includes classroom curricular and programs, and training students in social and academic skills they will need to negotiate their new learning environments. They recognize the importance of preparing the environment and individuals, if student in turn are to reap the benefits widely attributed to the cooperative learning approach.

This includes students' ability to adapt to their learning environment where their learning environment will refer to the approaches used by teacher in the teaching of C.R.E. If the students are able to adapt to cooperative learning approach then the teacher will find easy time using the approach. The student will need to be willing to work in small groups helping one another learn the content.

5.5 Recommendations

For the findings, the following were the recommendations:

I. There is a need for constant continuous development and improvement of school guidelines about how the teachers can use the cooperative learning method to teach schools, such guidelines includes aspect such as time tabling number of lessons and the time table or movement within lessons or how the teaching of C.R.E is conducted that is whether the school allows working in groups or the teacher must always teach

II. Students require to be thoroughly guided on how to adapt to the use of cooperative learning method without so much resistance, because if the method is not managed well it can lead to a lot time being wasted in the setting of the classes rather than on the lesson deliveries. This will require the teachers to be well adapted in the learning environment where their learning environment will refer to the approaches used by teacher in the teaching of C.R.E.

III. Teachers need to be prepared properly if there would be success in the use of cooperative learning. This preparation averages that teachers needs to be prepared, students need to be taught the appropriate interactional skills and teachers need to be taught how to work with groups, and the lessons and tasks need to be well organized.

IV. Regular training of teachers is required, teacher qualification can determine teacher use of cooperative learning approach in that if he/she is trained in the use of the approach, they will implement in class.

V. Equipping schools with equipment, teaching and learning resources, preparing physical space for learning and teaching ensuring the learning tasks. It is important to preparing the environment and individuals, if student in turn are to reap the benefits widely attributed to the cooperative learning approach.

5.6 Suggestions for further research

The following areas were suggested for study; school based factors influencing teachers' use of cooperative learning approaches in teaching of other subjects

The same topic on school based factors influencing teachers' use of cooperative learning approaches in teaching of CRE can be done in other Counties

REFERENCES

Antil.L, Jenkins .J, Wayne .S, & Vadasy .P (1998). Cooperative Learning Prevalence conceptualizations, and the relation between research and practice. American Education Research Journal, 35 (3)

Bain .A, Lancaster .J and Zundans .L (2009). Pattern language development in preparation of inclusive educators. International Journal of Teaching and Learning in Higher Education.

Baines, E, Blatchford,P, & Kutnick, P(2003*). Changes in the grouping over primary and secondary schools.* International Journal of Educational Research, 39, 9-34

Baines, E,Blatchford, P, & Kutnick, P. (2008). *Pupil grouping for learning; developing a social pedagogy in the classroom. In R, gillies, A, Ashman, and J, Terwel(Eds).*The teacher's role in implementing cooperative learning in the classroom(pp-55-71), Newyork; Springer

Bargh, J. & Schul, Y. (1980) "*On the cognitive benefits of teaching"* Journal of Educational Psychology 72 pp593-604

Bransford, J. (2000). *How People Learn: Brain, Mind, Experience, and School (expanded edition),* Washington: National Academies Press.

Cohen, E. (1992). *Restructuring the Classroom: Conditions for productive small groups*. Madison, Wisconsin Center for Education Research, 1992, ed347 639.

Cohen, E.G. (1994). "*Finding Out/Descrubrimiento: Complex Instruction in Science" Cooperative Learning* 1:30-31

David & Roger Johnson. (2001) "An Overview of Cooperative Learning. [Online] Available :<http://www.clcrc.com/pages/overviewpaper.html>2December 2010.

Dean, P.G. (1982). *Teaching and Learning Mathematics.* London, Wobun Press.

Elmore .R (2007). Professional networks and school improvement.

Felder, R. M. (1997). E-mail *communication from felder@*eos.ncsu.edu WWW page *http://www.ncsu.edu/unity/lockers/users/f/felder/public/rmf.html*

Gichaga, S. N. Et Al (2011). Christian Religious Education (KLB), 2nd Ed.

Gillies .R.M (2003). Structuring cooperative groups work in classrooms. International Journal of Educational Research.

Hagman, J. & Hayes, J. (1986). "*Cooperative Learning: Effects of task, reward, and group size on individual achievement"* Technical report 704, Scientific Coordination Office, US Army Research Institute for the Behavioral Sciences, ERIC document #278720

Hendrix, J.C. (1999). Connecting cooperative learning and social studies. The Clearing House.
5763. Retrieved fromhttp://ezpolson.nmu.edu:5749/ps/i.do?&id=GALE%7CA55684628&v=2.1&u=lom_nmic hu&it=r&p+ITOF&sw=w

Hennessey .A. & Diongi, Rylee .A. (2013) Implementing cooperative learning in Australian Primary Schools; Generalist teachers' perspectives, issues in Educational Research. Charles Sturt University

Hertz-Lazarowitz, R. (2008). *Beyond the classroom and into the community: the role of the teacher in expanding the pedagogy of cooperation*. New York Springer.

Jebungei, N. K. (2013*).* Overcoming the challenges facing secondary teachers in using Christian religious education to convey values to students. *International journal of humanities and social sciences vol 13 No115 august 2013*

Johnson, D.W & Johnson, R.T (1999). *Learning together and alone: cooperative, competitive and individualistic learning* (5th Ed). Boston: Allyn and Bacon.

Johnson , D. W & Johnson R. T. (2004). *Assessing students in a group*: California Crown Press

Johnson .D, Johnson .R and Smith .K (2004) constructive controversy; Effective techniques for stimulating college students.

Kagan, S. (1994).*Cooperative learning.* San Clemnte, California: Kagan Publishers

Kagan, S. (1986). "*Cooperative learning and sociological factor in schooling" in "Beyond: Social and cultural factors in schooling language minority students."*Los Angeles, CA: California State University Evaluation, Dissemination and Assessment Center.

Kothari, C.R. (2003) *Research Methodology*: Methods and Techniques. New Delhi: K.C. Grupta

Kowino, J.O, Agak J.O & Kochung, J.O. (2012).The significance of teaching C.R.E to develop critical thinking amongst Kenya secondary schools. *International journal of academic research in progressive educational development April 2012 vol 2 ISSN 226-6348*

Kulik, J.A. & Kulik, C.L. (1979). "College Teaching" in Peterson and Walberg (Eds.) *"Research in Teaching: Concepts, findings and implications"*, Berkeley, CA: McCutcheon Publishing.

Levin, H., Glass, G., & Meister, G., (1984), "*Cost-effectiveness of Educational Interventions"*, Stanford, CA: Institute for Research on Educational Finance and Governance.

Lopata, C., Miller, K. A. & Miller, R. H. (2003).Survey of actual and preferred use of cooperative learning among exemplar teachers. *Journal of Educational Research* (96)4, 232-239. http://dx.doi.org/10.1080/00220670309598812

Macharia, K., Githua B. & Mboroki, G. (2009). *Methods of Instructions.Kijabe: Kenya.*

Makini, V. S. (2011). Effects of cooperative learning approach on students' achievement and attitude towards oral literature genres in selected secondary schools in Kisii district- Kenya. Unpublished Thesis; Egerton University.

Matemba, Y.H. (2009). Religious education in the context of sub-Saharan Africa. The Malawin example: *British journal of R.E. vol31 no 441-451 jan 2009*

Meier, M., & Panitz, T. (1996). "*Ending on a high note: Better endings for classes and courses"*. College Teaching, Fall 1996.

Moor, L.D. (2010) *Guidline for teaching about religion in10-12 public schools in the USA American Academy of religion USA*

Mugenda, M.O & Mugenda, G.A. (2003). *Research Methods. Quantitative Approaches (2nd Ed)* Nairobi (ACTS) press

Muijs, D. & Reynold, D. (2005). *Effective teaching: Evidence and Practice* (2nded.). London: Sage Publications.

Neer, M.R. (1987), "*The development of an instrument to measure classroom apprehension"*, Communication Education 36, pp154-166.

Njoroge, J. N. (2006). Effects of cooperative learning on secondary school students' achievement and attitudes towards mathematics: a case of Nakuru district, Kenya. Unpublished Thesis; Egerton University.

Orodho, J (2002). *Techniques of Writing Research Proposal and Reports in Education and Social Sciences.* Nairobi: Masalo publishers.

Orora W. (2006).*Effects of cooperative concept mapping teaching approach on student's motivation in secondary school Biology.*A study in selected schools in Gucha District, Kenya.Unpublished thesis Egerton University.

Panitz, T (1996), "*Getting students ready for cooperative learning", Cooperative learning and College Teaching,* v6 N2, winter 1996.

Republic of Kenya (2002). *The Secondary Education Syllabus, Volume Three*. Nairobi: Kenya Institute of Education.

Schunk, D., Hanson, A., (1985), *"*Peer models: Influence on children's self-efficacy and achievement", *Journal of Educational Psychology 77(3) p313*

Schwartz, D.L., Black, J.B. & Strange, J. (1991). "*Dyads have fourfold advantage over individuals inducing abstract rules",* Paper presented at the annual meeting of the American Educational Research Assn . Chicago.

Sharan, S. (2006). *Group Investigation and Student Learning: An Experiment in Singapore Schools*. Marshall Cavendish Academic.

Sharan , V. & Sharan , S. (1992*). Expanding cooperative learning through group investigation.* New York: teachers college press

Slavin, R. E. (1995). *Cooperative learning*. Boston: Allyn and Bacon

Slavin, R.E. (1997). *Educational psychology: theory and practice (5th Ed*.). Boston: Allyn and Bacon Company

Slavin, R.E. (1994). "Student Teams Achievement Divisions*" Journal of Research and Development in Education, 12(June) 1978, pp 39*-49

Slavin, R.E. (1987). "*Cooperative Learning Student Teams"* 2nd Ed. Washington, DC: National Education Association.

Slavin, R.E. (1991*). Student Team Learning: A practical guide to Cooperative Learning.* Washington, DC: National Education Association.

Strain, C. R. (2008). Pedagogy and practice: service learning and students' moral development in new directions for teaching and learning.

Swing, S., Peterson, P., (1982), "The relationship of student ability and small group interaction to student achievement*", American Educational Research Journal, 19 pp259-274.*

Tobias, S.; Duffy, T.M. (2009).*Constructivist Instruction: Success or failure?*.New York: Taylor & Francis. ISBN 9780415994231

Turnure, J. & Ziegler (1958), "Outer-directedness in the problem solving or normal and retarded students", *Journal of Abnormal and Social Psychology, 57 pp379-388.*

Wachanga, S. W. (2002). Effects of cooperative class experiment teaching method on secondary school students' motivation and achievement in chemistry. Unpublished Ph.D thesis, Egerton University, Njoro.

Webb, N.M., (1982), "Group composition, group interaction and achievement in small groups", J 74(4) pp475-484 *Journal of Educational Psychology*.

Wooley,S., Switzer,T., Foster, G., Landes,N., Robertson,W., (1990), *"BSCS Cooperative learning and science program"*, Cooperative Learning 11(3).

Yamarik, S. (2007). Does cooperative learning improve student learning outcomes? *Journal of Economic Education (Summer)*. 38 (3). 275

Zakaria, E. & Iksan, Z**.**(2007). *Eurasia journal of mathematics, science and technology education*.

APPENDICES

APPENDIX I: INTRODUCTION LETTER

Margaret B. A. Omao
University of Nairobi
P.O. Box 30197
NAIROBI

Dear Sir/Madam,

RE: PARTICIPATION IN RESEARCH

I am a student of the University of Nairobi currently pursuing a Degree of Master of Education in Curriculum Studies.

I wish to request you to allow me carry out research in your school. The research topic is school factors that can influence the use of cooperative learning approaches in the teaching of CRE in Secondary Schools in Nakuru Sub-county.

The research is to be carried out in partial fulfillment of the requirements for the Degree of Master of Education in curriculum studies, University of Nairobi.

Your consideration is greatly appreciated.

Yours faithfully,

Angwenyi Margaret B. Omao
E55/79375/2012

APPENDIX II: QUESTIONNAIRE FOR TEACHERS

The purpose of this questionnaire is to learn more about the factors influencing teachers' use of cooperative learning a method of teaching in which students help one another learn in small groups.

Your individual responses will be kept strictly confidential.

INSTRUCTIONS

The response scale is indicated for each section. Please circle the response on the answer sheet that best corresponds to your position.

SECTION I

1. What is your gender?

A. Female

B. Male

2. How many years have you been in teaching?
   A. 0 to 1 years
   B. 2 to 5 years
   C. 6 to 15 years
   D. 16 to 24 years
   E. 25 years or more

3. Besides CRE, which other subject do you teach? Indicate the one that you spend the most time teaching.)

---

4. What is the composition of your class in terms of ability?
   A. Mostly above average ability students
   B. Mostly average ability students
   C. Mostly below average ability students

D. Mixed (all ability levels)

5. What is the size of your class?
   A. Less than 18 students
   B. 18 to 24 students
   C. 25 to 29 students
   D. 30 to 34 students
   E. More than 34 students

6. Which of the following comes closest to your teaching environment?
   A. I have my own classroom.
   B. I usually go to different classrooms to teach.

7. For how many years have you been using cooperative learning
   A. None
   B. Less than 2 years
   C. Between 2 and 4 years
   D. Between 4 and 8 years
   E. More than 8 years

8. Amount of workshop training in cooperative learning that you have received
   A. None
   B. Less than a full day
   C. Between 1 and 2 days
   D. Between 3 and 6 days
   E. More than 6 days

9. Which of the following methods of cooperative learning do you use most?

   A. Teams Games Tournament (TGM),

   B. Student Team Achievement Division (STAD)

C. Jigsaw

10. Which type of follow-up support in cooperative learning have you received? (mark all that apply)

A. None

B. With trainer

C. With fellow teacher(s)

D. With administrator(s) (e.g., principal, curriculum consultant)

E. Other (please specify on answer sheet)

_____

SECTION II - Teacher Views on Cooperative Learning

For each of the following statements, please TICK (√) the response on the answer sheet that best corresponds to your position, according to the following response scale.

Response Scale:

A. Strongly Agree (SA)

B. Agree (A)

C. Undecided (U)

D. Disagree (D)

E. Strongly Disagree (SD)

No	STATEMENT	SA	A	U	D	SD
11.	The amount of cooperative learning training I have received has prepared me to use it successfully in the teaching of CRE					
12.	I understand cooperative learning well enough to use it successfully					
13.	It is not easy to use cooperative without proper training					
14.	Evaluation of students is not possible when using cooperative learning					

15.	It is impossible to implement cooperative learning without proper training					
16.	Cooperative learning holds bright students back					
17.	There is too little time to prepare students to work effectively in small groups					
18.	I find cooperative learning too difficult to use successfully					
19.	My students presently lack the skills necessary for effective cooperative group work					
20.	I Prefer using familiar teaching methods over trying new ones					
21.	My students lack the necessary skills for effective learning in small groups					
22.	The students are always eager to engage in peer assisted learning					
23.	My students do not like being challenged by peers					
24.	Students feel inadequate to share information					
25.	Cooperative learning is a valuable instructional approach since students remain actively involved and find solutions to problems					
26.	Peer interaction helps students obtain a deeper understanding of the material					
27.	My training in cooperative learning has not been practical enough for me to implement it successfully					
28.	Cooperative learning is appropriate for bright students					
29.	If I use cooperative learning, too many students expect other group members to do the work					
30.	It is impossible to implement cooperative learning without adequate learning materials					
31.	Using cooperative learning fosters positive student attitudes					
32.	Cooperative learning places too much emphasis on developing students' social skills					
33.	Engaging in cooperative learning enhances students' social skills					

34.	It is impossible to evaluate students fairly when using cooperative learning					
35.	There is too little time available to prepare students to work effectively in groups					
36.	There are too many students in my class to implement cooperative learning effectively					
37.	My students are resistant to working in cooperative groups					
38.	Engaging in cooperative learning interferes with students' academic progress					
39.	Implementing cooperative learning requires a great deal of effort					
40.	Cooperative learning is inappropriate for the subject I teach					
41.	Cooperative learning enhances the learning of low-ability students					
42.	I feel pressured by other teachers to use cooperative learning					
43.	Cooperative learning is an efficient classroom strategy					
44.	Implementing cooperative learning takes too much class time					
45.	Using cooperative learning fosters positive student attitudes towards learning					
46.	I find that cooperative learning is too difficult to implement successfully					
47.	I prefer using familiar teaching methods over trying new approaches					
48.	If I use cooperative learning, my classroom is too noisy					
49.	Implementing cooperative learning takes too much preparation time					
50.	Cooperative learning gives too much responsibility to the students					
51.	The physical set-up of my classroom is an obstacle to using cooperative learning					

ALL RESPONDENTS

Thank you very much for your participation in this study.

APPENDIX III: QUESTIONNAIRE FOR STUDENTS

Cooperative learning is a teaching instructional approach in which students work in small groups to enhance their own and their classmates learning.

Tick the statement that corresponds to your position.

Response scale

Strongly Agree (SA)

Agree (A)

Undecided (UN)

Disagree (D)

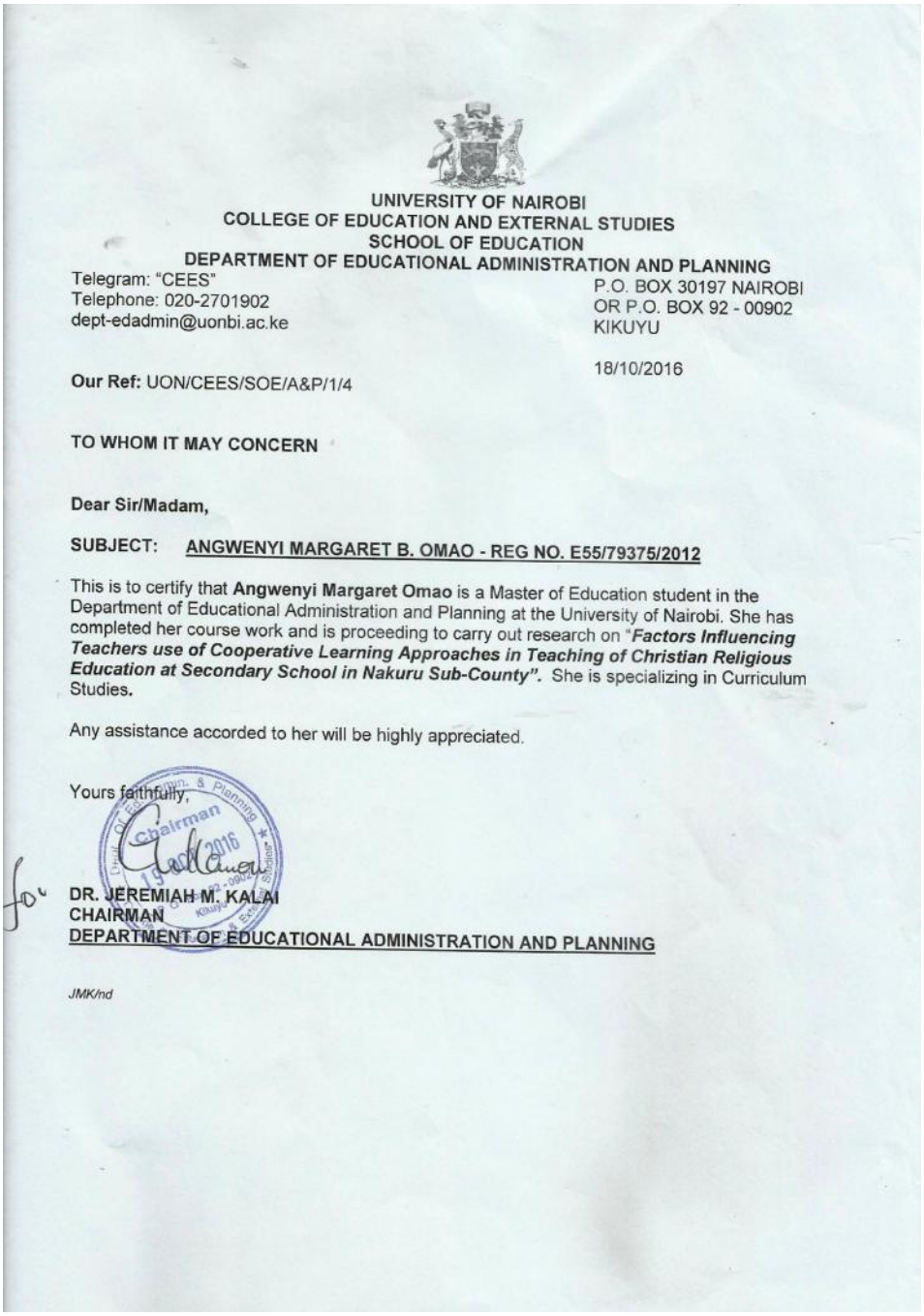
Strongly Disagree (SD)

		SA	**A**	**UN**	**SA**
1.	We always assist one another understand concepts in small groups				
2.	Our teacher of CRE encourages us to work in teams				
3.	The number of students in our class allows us to work in groups				
4.	Some of my classmates are shy and find it difficult to contribute to the group tasks				
5.	Students with high academic ability feel slowed down in the learning when working in small groups of mixed				
6.					

	ability				
7.	Our teachers have adequately trained/equipped us on interactional skills				
8.	The curriculum allows adequate time for face to face interaction				
9.	Our teacher understands working in small groups and assists us through to work in small groups				
10.	The teacher remains in class and enjoys teaching C.R.E through small group tasks				
11.	The teacher disappears immediately we begin group activities				
12.	We enjoy learning C.R.E in small groups where we share ideas and assist one another learn				
13.	There are adequate teaching and learning resources that make it possible for us to work in small groups				
14.	As students we are always willing to share knowledge and help one another understand concepts				
15.	Students of high academic ability are always ready to help others understand				
16.					

17.	The school administration encourages and supports teachers in using co-operative learning by providing CRE text books				
18.	We have adapted fully to learning in small groups				
19.	Students understand and critically analyze concepts when learning in small groups				
20.	The teachers create a favorable learning environment that allow learner centred classrooms				

APPENDIX IV: LETTER OF INTRODUCTION FROM SCHOOL OF POST GRADUATE STUDIES



UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING

Telegram: "CEES"
Telephone: 020-2701902
dept-edadmin@uonbi.ac.ke

P.O. BOX 30197 NAIROBI
OR P.O. BOX 92 - 00902
KIKUYU

18/10/2016

Our Ref: UON/CEES/SOE/A&P/1/4

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

SUBJECT: **ANGWENYI MARGARET B. OMAO - REG NO. E55/79375/2012**

This is to certify that **Angwenyi Margaret Omao** is a Master of Education student in the Department of Educational Administration and Planning at the University of Nairobi. She has completed her course work and is proceeding to carry out research on "***Factors Influencing Teachers use of Cooperative Learning Approaches in Teaching of Christian Religious Education at Secondary School in Nakuru Sub-County".*** She is specializing in Curriculum Studies.

Any assistance accorded to her will be highly appreciated.

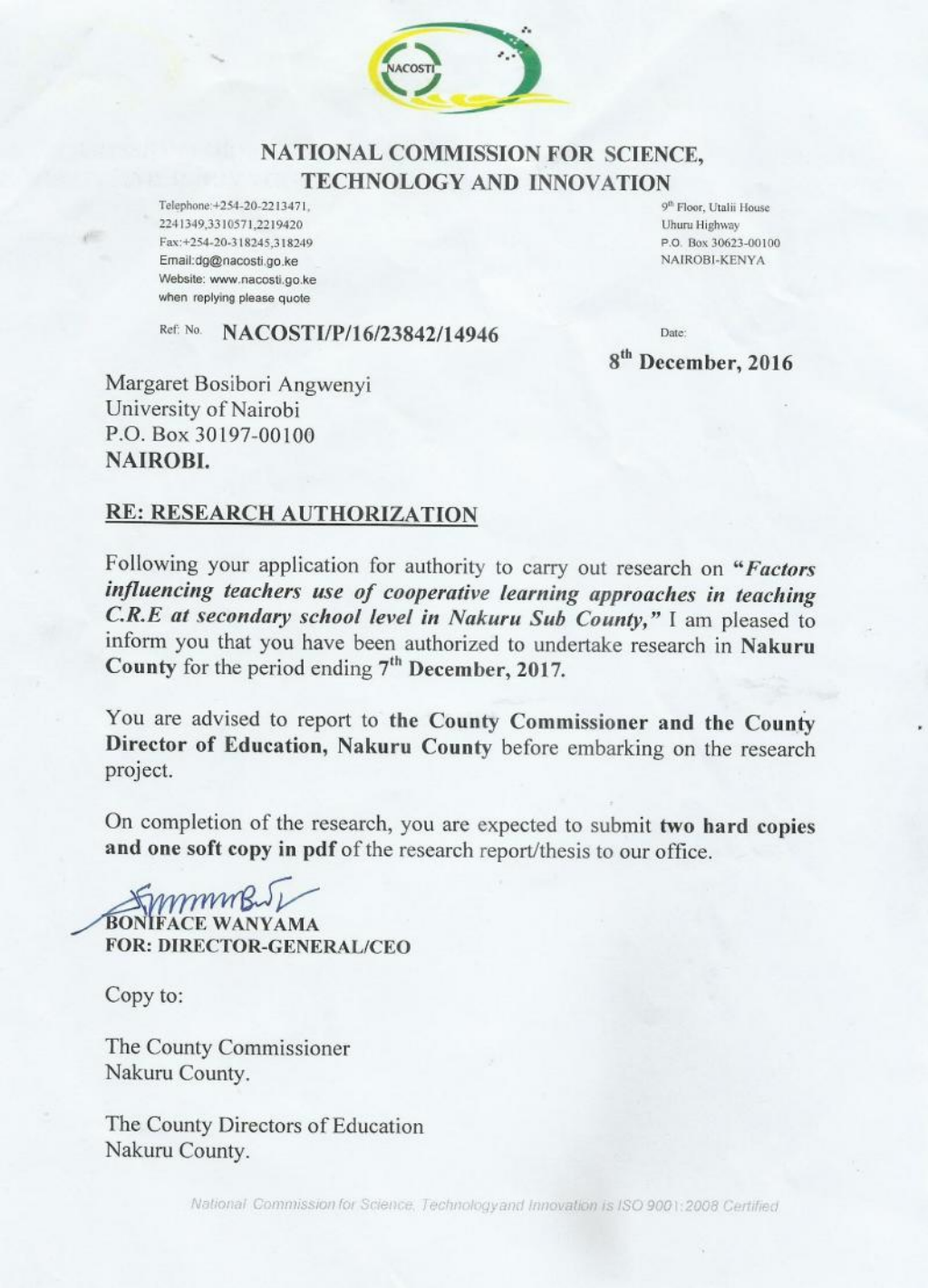
Yours faithfully,

Chairman 2016

DR. JEREMIAH M. KALAI
CHAIRMAN
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING

JMK/nd

APPENDIX V: AUTHORIZATION LETTER BY NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471, 2241349,3310571,2219420
Fax:+254-20-318245,318249
Email:dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/16/23842/14946**

Date: **8th December, 2016**

Margaret Bosibori Angwenyi
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Factors influencing teachers use of cooperative learning approaches in teaching C.R.E at secondary school level in Nakuru Sub County,"*** I am pleased to inform you that you have been authorized to undertake research in **Nakuru County** for the period ending **7th December, 2017.**

You are advised to report to **the County Commissioner and the County Director of Education, Nakuru 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.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nakuru County.

The County Directors of Education
Nakuru County.

National Commission for Science, Technology and Innovation is ISO 9001:2008 Certified

APPENDICES VI: RESEARCH

PERMIT

THIS IS TO CERTIFY THAT:
MS. MARGARET BOSIBORI ANGWENYI
of UNIVERSITY OF NAIROBI, 1352-0
Nakuru,has been permitted to conduct
research in *Nakuru County*

Permit No : NACOSTI/P/16/23842/14946
Date Of Issue : 8th December,2016
Fee Recieved :Ksh 1000

on the topic: *FACTORS INFLUENCING TEACHERS USE OF COOPERATIVE LEARNING APPROACHES IN TEACHING C.R.E AT SECONDARY SCHOOL LEVEL IN NAKURU SUB COUNTY*

for the period ending:
7th December,2017

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEACH CLEARANCE PERMIT

Serial No.A 12265

CONDITIONS: see back page

APPENDICES VII: MAP OF KENYA SHOWING NAKURU SUBCOUNTY