EFFECT OF COOPERATIVE LEARNING APPROACH ON ACADEMIC MOTIVATION, ACHIEVEMENT IN ENGLISH AND ENVIRONMENTAL PERCEPTION AMONG COUNTY CO-EDUCATIONAL SECONDARY SCHOOLS, NAKURU COUNTY, KENYA

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A Thesis Submitted to the Institute of Postgraduate Studies Kabarak University in Fulfillment of the Requirements of Doctor of Philosophy in Education (Curriculum Studies)

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DECLARATION

1. I do declare that:

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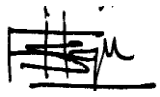
To the Institute of Postgraduate Studies:

The research thesis entitled **Effect of Cooperative Learning Approach on Academic Motivation, Environmental Perception and English Achievement in County Co-Educational Secondary Schools, Nakuru County, Kenya"** and written by **Vitalice Sonoi Makini** is presented to the Institute of Postgraduate Studies of Kabarak University. We have reviewed the research thesis and recommend it be accepted in partial fulfillment of the requirement of Doctor of Philosophy in Education (Curriculum Studies).

Signed  Date: 11th November, 2021

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DEDICATION

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ABSTRACT

A lot of scholarly research articles have lauded the positive significant contribution of Cooperative Learning Approach (CLA) and its effect on student's academic achievement. The objectives of the study were to: determine the effect of CLA on student's academic motivation in English in Public Co-Educational County Secondary schools in Nakuru County Kenya; examine its effect on Public Co-Educational County Secondary schools student's perception of their classroom environment, and to establish its effect on students' achievement in English in Public Co-Educational County Secondary schools in Nakuru County Kenya. The study further sought to establish the moderating effect of gender on the dependent variables. The study was guided by cooperative learning integrative theories of motivation. The theoretical framework was based on motivational theories and Slavin (2006) Research on Co-operative Learning. The study adopted quasi experimental design, based on Solomon Four- group, Non-equivalent Control Group Design. The target populations were students and teachers from the four Public Co-Educational County Secondary schools of Nakuru County. The accessible population was 766 form three students in the four schools. The study further used simple random sampling in the selection of schools and purposive sampling to select the form three class to participate in the study. A sample size of 242 from three students and four teachers of English was used. The study involved two Experimental groups, E_1 and E_2 which were taught through CLA method and two Control groups, C_1 and C_2 which were taught through the Conventional methods. Three instruments were used to collect quantitative data namely; English Achievement Test (EAT); Students' Motivation Questionnaire (SMQ), Student Perception Guide (SPG) of their classroom environment while Teachers Perception Guide(TPG) and Student Interview Guide (SIG) were used to collect qualitative data. Pilot testing of the instruments, EAT, SMQ, and SPG was done in one Public Co-Educational County Secondary schools within Nakuru County that had similar character traits as the sampled schools. Cronbach's alpha coefficient was used to determine the reliability of EAT, SPG and SMQ. A reliability coefficient of 0.812 for EAT, 0.801 for SPG and 0.789 for SMQ were obtained, hence the instruments were acceptable. Data was analyzed using both descriptive and inferential statistics using the Statistical Package for Social Sciences (SPSS version 24). The differences between the group means was analyzed using t-test, ANOVA, ANCOVA and statistical significance tested at alpha=0.05. The study found out that there was statistically significant effect of cooperative learning approach on students' academic motivation in English in public co-education secondary schools in Nakuru, County Kenya ($F(1,126)=737.625$, $P<0.05$). It was also found that there was statistically significant effect of cooperative learning approach on students' achievement in English in public co-educational county secondary schools in Nakuru, County Kenya ($F(1,216)=113043.974$, $p<0.05$). The study further found that gender of the students had a statistically significant moderating effect on the relationship between cooperative learning approach and students' perception of classroom environment as well as students' achievement of English in public co-educational secondary schools in Nakuru, County Kenya. The findings of the study would be beneficial to teacher training colleges and universities, in incorporate CLA in their pre-service teacher training as they shift and prepare teachers to the new Competence Based Curriculum (CBC) and English teachers to adopt CLA as an instructional strategy that would help improve the performance of the subject.

Keywords: *Cooperative Learning Approach, Academic Motivation, Perceptions and Achievement*

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ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of variance
ANCOVA	Analysis of covariance
CBC	Competence Based Curriculum
CIRC	Cooperative Integrated Reading and Composition
CLA	Cooperative Learning Approach
CL	Cooperative Learning
CLS	Cooperative Learning Strategy
EAT	English Achievement Test
ESL	English Second Language
EU	European Union
GI	Group Investigation
KCSE	Kenya Certificate of Secondary Education
KICD	Kenya Institute of Curriculum Development
KIE	Kenya Institute of Education
KNEC	Kenya National Examination Council
MOE	Ministry of Education
MOEST	Ministry of Education, Science and Technology
NACOSTI	National Commission of Science, Technology and Innovation
SIG	Student Interview guide
SMQ	Student Motivation Questionnaire
SPQ	Student Perception Questionnaire
STAD	Student Teams – Achievement Divisions
SPSS	Statistical Package for Social Sciences
TIG	Teacher Interview Guide

OPERATIONAL DEFINITION

Academic Motivation: Refers to the means that cause somebody to act in a certain manner concurring academics. In this study the term encompassed those states of the individual which she/he attends certain aspects of his/her environment hence behavior is both initiated and directed.

Co-operative Learning Approach: This is the utilization of minimal cohorts of (4-5) learners in order to ensure that they participate in studying in unison in order to realize their own personal potentials and each other are studying. This definition was adopted in learning English grammar.

English Achievement: It refers to student's academic performance in English. In this study it refers to the student's academic performance in English Achievement Test (EAT).

Environmental Perception: This refers to emotional feelings towards the immediate surroundings. In this study, environmental perceptions are emotional feelings of learners towards a change in the classroom setting of learning activities in English grammar.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The focus of this chapter is to discuss the background to the study by analyzing the global, regional and Kenyan perspectives on Cooperative and Conventional Learning Approaches. Further, the Chapter articulates the statement of the problem, purpose and objectives of the study as well as the hypotheses that were formulated and tested. Finally, the significance, scope, limitations of and key assumptions underpinning the study are outlined.

1.2 Background to the Study

Teaching has for many years been always linked with conventional teaching styles, where teachers become the fountains of knowledge and learners who are taught are required to comprehend and give feedback of the same content during evaluation time. Several studies such as Sharan (2018), Pandya (2017) and Saltymakov and Frantcuzskaia (2015) noted that this put widespread bottlenecks in all academic schools of learning, notwithstanding level of grade, and less concern given to the studying itself. To the contrary, a lot of research studies had it that true comprehension was an issue of the students active restructuring. Restructuring occurred through students learning to ask questions and looking for solutions through research, finding out and relating of concepts. All these processes were mandated to far more constructive students and other types of teaching approaches than the ones presently advocated by most teachers in secondary schools especially the (conventional teaching approaches) (Altun, 2015).

Rather than learners being hopeless and teacher reliant, students should be allowed to reason, study on their own and hence studying be understood to be student centered and not what is done to the student by someone else (Gokhale, 2015). This statement

underscored the interest and motivation which informed the need, its importance and relevance for conducting this research study on active or spirited learning approach .One such method of active learning was Cooperative Learning Approach, (CLA) which is student centered, and uses team members or group work to improve on student academic achievement and is linked with better performance, motivation and interdependence skills (Melnichuk and Osipova, 2017).

1.2.1 Global Perspective of Cooperative and Conventional Learning Approaches

A study carried out by Olsen (2018) on elementary students found that cooperative learning approach was an organized and structured way of using groups, to increase learner's knowledge and linkage. In the study, learners were issued with practice exercises, which they did in groups so that they would in return be able to achieve team goals. Every member was held responsible to the allocated duties in as far as aiding and contributing towards the finishing and accomplishing of the task; and therefore, achievement depended on every member's contribution to the team. In addition to that, studying and learning amongst them made them to actively participate as a group and rely on others in solving of problems.

In the United States of America, Salimah (2017) investigated students' perception of group investigation and averred that high performing learners had significant better and positive perception of their classroom environment and subject, hence leading to higher academic performance. Moreover, the study not only found that the perception of teachers on cooperative learning approach was highly positive, but also established consensus that the cooperative learning approach improved and turned on an attractive classroom learning environment for the learners and teachers. This was not the case for the control groups that used conventional learning approaches. The author established that, the lecture method used on conventional learning approach was unattractive to the

learners and produced lower outcomes in academic assignments among the students.In Australia, Vladimir and Salinas (2016) revealed that teachers' perceived cooperative learning and its classroom environment as beneficial in improving students critical thinking and as well developing their social skills. The teachers also noted that cooperative learning approach improved their teaching practices unlike conventional learning methods that resulted to less motivated teachers. In a study by Page (2017) in New Zealand, the findings were in agreement with Vladimir and Salinas (2016) results that students found cooperative learning approach beneficial to them in developing social skills and their behaviours. Unlike cooperative learning approaches, Page (2017) found that conventional learning methods produced poor outcomes of students' social skills and behaviours.

Comparing the learning environment provided by cooperative learning approach and the conventional methods of learning, Çolak (2015) noted that using cooperative learning teaching approaches or team aided learning, students actively participated together, and engaged in teams in order to aid one another in studying. Learners were put in collaborative or group teams of 4 to 5 members, and they did hold on together as a team for three weeks and above. The learners were strictly instructed on how to hang together and actively engage as a team through active deliberations, healthy discussions that were devoid of criticism of group members. Çolak (2015) asserted that cooperative learning approach provided a friendly learning environment more than conventional methods that did not provide an opportunity for students to collaboratively engage in learning. It was in this respect established that through cooperative learning, students were able to interact more freely in discussing the classroom-taught concepts as opposed to conventional methods where students remained quiet while the teacher taught.

Sharan (2018) carried out a research, through the use of cooperative learning approach, and the study found out that students from different cultures were not viewed as a problem or risk but as a source of learning. Through the use of CLA students were able to harness cultural differences in the pursuit of learning goals in an environment that showed respect for all contributions from different learners. In Russia, a study by Saltymakov and Frantcuzskaia (2015)established that there were several benefits achieved through the use of cooperative learning approach. One of the benefits that the study highlighted was that students from different backgrounds and abilities were able to gain status and acceptance among their peers. It was also noted that cooperative learning approach resulted to teachers and students from different backgrounds realizing that different interests, values, and abilities from group members were great assets that enriched the class's pool of resources to expand knowledge. Contrary to this, conventional learning approaches did not provide an opportunity for learners to exchange their ideas and knowledge from their different backgrounds and thus lowering the academic achievements of students under conventional learning.

In another study done by Johnson and Johnson, (2014)it was established that in a cooperative learning approach environment, learners worked together in order to achieve team objectives that could not be achieved while working alone or by working in a contest. The findings further alluded to the fact that, in a cooperative learning approach environment, students discussed content material; helped one another to study and this motivated team members to learn (Johnson & Johnson, 2014). Moreover their views were also supported by Sapon-Shevin and Schniedewind (2015)who found that learning sessions in small groups provided through cooperative learning approach to have involved all students of low and high ability achievers who participated to make studying successful. Sapon-Shevin and Schniedewind (2015) noted that conventional learning

methods resulted to unconducive learning environment for students and less motivation among the students.

Adams (2015) in United States of America established that the use of cooperative learning approach was associated with a number of advantages in the classroom learning as compared to conventional methods. Some of the key advantages of cooperative learning approach include, its ability to support constructive interactions that enable learners to recognize individual duty and responsibility. Cooperative Learning Approach also enable students to work together in small groups while offering opportunities for learners to nurture teamwork spirit, engagements, linkages and collaborations with others; an opportunity that is missing through the lecture method in conventional learning approach.

In the context of England, Melnichuk and Osipova (2017) revealed that cooperative learning enabled the students to understand various concepts through critical thinking. The opportunities provided by cooperative learning approach motivated students towards learning as opposed to the other conventional methods of learning. Gokhale (2015) revealed that in cooperative learning approach, students were responsible for one another's learning as well as their own. On the other hand, Pandya (2017) noted that learning of Mathematics using conventional methods was effective among students who had low intelligence quotient. However, Laguador (2016) in Philippines noted that conventional teaching methods were not effective in outcome-based environment of students. In respect to this, students taught using conventional methods had lower academic outcomes when compared to those taught using cooperative methods.

1.2.2 Regional Perspective of Cooperative and Conventional Learning Approaches

In studies done in the rest of Africa especially Nigeria,Obinna-Akakuru et al., (2015) and Oludipe and Awokoy (2015) found that usage of Cooperative Learning Approach, and student characteristics, not only contributed to student's motivation to achieve but also on their expectation level for achievement and fear of failure. Additionally, Mohammed (2017) found that a lack of motivation to learn from students' perspective when using conventional learning approach made them not to successfully participate in learning assignments which later made them find tasks challenging and hence leading them to perform poorly academically. However, external motivation geared towards influencing learners to perform well in classroom assignments through extrinsic rewards, such as prizes, was perceived as bribes, and this decreased the level of performance if the prizes were not awarded continuously (Mohammed, 2017).

Moreover a study by Oludipe and Awokoy (2015) in Nigeria established that there were significant differences in the level of academic achievement between the students taught using the conventional methods of teaching and those using the cooperative learning approach. Obinna-Akakuru et al., (2015) established that through the use of cooperative learning approach, different worlds of different people met and obtained information on ethnic background and history of communities. In a study by Jamabo and Chikodi (2018)on the effect of cooperative learning on English language achievement among high school learners in Delta State Nigeria and Implications for counseling, the findings put forward that cooperative learning expanded learners' English language reading skills. Haliru (2015)conducted an inquiry into the impact of Cooperative Learning Strategy (CLS) on geography learner's educational achievement in high schools in Sokoto State, Nigeria and established that the learners who were in the experimental group (CLS)

performed significantly better than their counterparts in the control group (lecture method).

1.2.3 Kenyan Perspective of Cooperative and Conventional Learning Approaches

English as a service channel for teaching in Kenyan schools, as a matter of fact, is an indispensable discipline both in educational programmes and as a utility subject(Kotut, 2016). The functions of English are varied, among them being; fulfilling educational, developmental, social, aesthetical aspects and cognitive development. In Kenya, elements of grammar and literature are integrated and taught as one subject namely, English. The components of the integrated English include; grammar items, comprehension passages, cloze test, poetry and poem appreciation, oral literature genres, and literature set books. There is poor language prowess of English by secondary school learners in the last three decades. These challenges impact on the instruction and study of English in Kenya and have become a worrying issue to the Government, not only because English is a medium used for communication in the school educational programmes but also holds a distinctive and noteworthy position in the country.

A study by Chebii, Wachanga, and Anditi (2018)summarized the benefits of CLA in classroom practice. Firstly, that co-operative learning as an instructional approach promotes student centered learning, increases students' motivation and supports collaboration. Secondly, that learners and teachers' roles and duties change tremendously from being dependent and passive to learner centered and active participants in the learning process, and on the contrary teachers take the role of guiding instead of being transmitters' of knowledge. Lastly, Cooperative Learning Approach largely emphasizes on students of mixed abilities helping each other to study in small groups, which improves student's motivation and their academic achievement. Unlike cooperative

learning approach, conventional learning approaches do not incorporate student interactions and this leads to less motivation of students and hence low academic achievement among the students.

Jepkoskey (2018) revealed that cooperative learning had more added advantages than other conventional instructional approaches as far as improving learners' communication, social interaction, cognitive and motivation skills were concerned. The study revealed that cooperative learning approach improved the social interaction of students as well as their motivation towards learning more than conventional teaching methods. In respect to this, the researcher revealed that that there were significant differences in the academic achievement of students taught using the two methods.

Njenga (2018) revealed that cooperative learning approach through use of small groups encouraged learners to work together and accomplish shared goals and subsequently maximized theirs and others' potential. Nyabiosi, Wachanga, and Buliba (2017) who undertook a study in secondary schools of Kisii County, revealed that the use of cooperative learning approach was a significant predictor of academic achievement of students in Kiswahili Language Comprehension. Kamau (2015)reviewed the impact of cooperative learning approach on educational attainment of high school learners in mathematics in, Murang' a County. The study recommended that the learners exposed to cooperative learning approach performed well unlike those exposed to the conventional instructional approaches, and that their feelings towards teamwork while learning mathematics together in small groups improved drastically.

In addition to that, Muraya and Kimamo (2017) established that there were significant differences in the mean scores of the students in Biology tests between the students taught using cooperative learning approach and those taught using regular methods of

teaching. Whereas the above studies looked at the effect of Cooperative Learning Approach in Kiswahili and Biology it was of interest for this study to establish Cooperative Learning Approach effect in English subject. Muraya and Kimamo (2017) revealed that cooperative learning classroom provided an eye-opening move from the conventional classroom instructional approach where teachers' talk dominated, to a student – centered learning environment and that the influence of cooperative learning approach on the mean scores of high school learners in poetry, narratives and biology showed that it had a significant higher mean score in comparison to that of the conventional learning approaches. The findings further posited that Cooperative Learning Approach had no significant influence on student's gender and that of their performance in the subjects. An inference was therefore drawn that, Cooperative Learning Approach was an effective instructing approach which teachers should use in class.

Keter, Wachanga, and Anditi (2017) study also established that learning using cooperative learning approach in class was enjoyable. A further study by Chebii, Wachanga, and Anditi (2018) in Koibatek Sub-county revealed that there were significant differences in the academic performance in Chemistry test between the students who were taught using the cooperative learning approach and those who were taught using conventional methods. Keter (2018) concurred with the findings of Wekesa (2015) study on students' classroom environment perception. In the study, the use of cooperative teaching in chemistry learning contributed to an enjoyable instructional environment as compared to extra-curricular activities. It was therefore to the interest of this study to establish the effect of Cooperative Learning Approach on secondary schools students' perception of their classroom environment towards learning English subject in Nakuru County.

Table 1 depicts the overall picture of KCSE English analysis for the year 2014 to 2018 according to KNEC report for the year 2019.

Table 1: Candidate's Overall Achievement in Integrated English from 2014 to 2018

Year	Paper	Candidature	Maximum score	Mean score
2014	1	482,499	60	29.02(48.37%)
	2		80	28.70(35.88%)
	3		60	19.97(32.28%)
	Overall		200	77.68(38.84%)
2015	1	525,621	60	29.37(48.95%)
	2		80	31.86(39.82%)
	3		60	19.35(32.25%)
	Overall		200	80.58(40.29%)
2016	1	571,644	60	29.15(48.58%)
	2		80	20.39(25.49%)
	3		60	18.52(30.86%)
	Overall		200	68.06(34.03%)
2017	1	610,084	60	25.89(43.30%)
	2		80	28.24(35.30%)
	3		60	19.42(32.37%)
	Overall		200	73.55(36.77%)
2018	1	659,953	60	29.15(48.58%)
	2		80	24.78(30.98%)
	3		60	18.85(31.42%)
	Overall		200	72.78(36.39%)
2019	1	659,953	60	29.00(48.00%)
	2		80	33.00(41.25%)
	3		60	20.00(33.33%)
	Overall		200	82.00(41.00%)

Source: Adapted from Kenya National Examination Council 2019

KNEC (2019) English report showed that the subject's overall mean ranged between34.03% and 41.00% over the years 2014 – 2019 with the overall national performance mean still falling short of the ideal mean of 100(50%), hence calling for innovation in teaching students. The subject mean in 2018 dropped minimally by 0.77 points from 73.55 in 2017 with a standard deviation of 22.57 to 72.78 in 2018 with a standard deviation of 22.27. Compared to 2017, there was a drop in the performance of English Paper 2 and Paper 3.

While it may also be appreciated that the KNEC Report highlighted the consequences of insufficient coverage of the syllabus by the teachers and poor comprehensive knowledge of the syllabus by learners as twin factors that lead to low achievement in English, it was notable that, it only focused on output factors but failed to address on other input and process factors such as teaching methods as well as learners' academic motivation and perception of their classroom environment that could be contributing to students' persistent low achievement. The body mandated with evaluation accepted that there was need for research to be done on the appropriate teaching methods, which would be put in place and adopted so as to improve the overall mean performance of English subject to 50%.

Table 2: Candidates Overall Performance in English from 2015 to 2019 in Nakuru County

Sub-County	Mean 2019	Mean 2018	Mean 2017	Mean 2016	Mean 2015
Nakuru East	3.15	3.94	4.05	3.55	3.88
Gilgil	3.01	3.11	3.64	3.11	5.01
Kuresoi South	4.07	2.71	3.33	3.89	4.15
Molo	3.21	3.39	3.90	2.65	2.88
Naivasha	4	3.31	3.64	3.12	4.59
Nakuru West	3.16	3.01	3.38	2.73	1.32
Njoro	1.97	2.06	1.03	2.68	3.78
Subukia	3.04	3.03	3.52	3.88	4.38
Rongai	3.23	3.37	3.62	3.54	3.12
Nakuru North	3.19	4.06	4.89	5.41	5.81
Kuresoi North	3.34	3.84	3.33	2.74	3.23
County Average Mean	**3.22**	**3.26**	**3.00**	**2.81**	**3.33**

Source: Adapted from Kenya National Examination Council 2019

In Kenyan context, the low achievement of English was further supported and evidenced by Nakuru County's average mean of 3.10 out of a possible 12 points which translated to 25.83% and which was still lower than the overall mean score of 37.64% and notably a worrying negative drop of 11.43%.Therefore, it was against this backdrop of information that this research study sought to fill the knowledge gap and investigate the effects of using Cooperative Learning Approach on students' academic motivation, classroom environmental perception and achievement in English, in Public Co-Educational County Secondary schools, in Nakuru County.

While there was a growing consensus among researchers about the positive effects of cooperative learning on student achievement, there was however no specific study that had been carried out in Nakuru County to establish if the process and input factors had an effect in English, and indeed what effect CLA could have on students' academic motivation, perception of classroom environment and achievement in English. In addition to that the current study was different from the reviewed studies in terms of methodology, concepts investigated and contexts in which the studies were conducted. This therefore presented research gaps that were filled by the current study.

1.2 Statement of the Problem

The role of English language in Kenya's education system is crucial and central in shaping students' careers and facilitating their economic, political and social interactions in the society. However, its importance is overshadowed by student's low achievement in English annually in national examinations as is evidenced by the KNEC (2019) reporting an overall national mean ranging between 34.03% and 41.00% over the years 2014 – 2019. Regionally, Nakuru County reported an average mean of 3.10 out of a possible 12 points which translated to 25.83% between 2015 and 2018 and was still lower than the overall national mean score of 37.64% which was notably a worrying negative drop of 11.43%. This implies that Nakuru County performed poorly in English Subject compared to the national performance in the subject. This is a worrying trend that does not augur well with the Kenyan Government and other Education stakeholders. This English Language Analysis report made manifest that the overall performance fell short of the ideal national mean of 50% (mean score of 6.0) hence calling for innovation and creativity in teaching and preparing candidates for Examinations.

Past studies have attempted to explain this trend of low achievement. However it's notable that they have largely focused on output factors such as inadequate syllabus coverage and lack of content mastery, with no scrutiny of input and process factors such as learning approaches, learner motivation and perception of the classroom environment. This observation underscores the necessity and importance of this study because student's low achievement especially in secondary schools in Nakuru County makes them not realize their career goals and aspirations.

The low achievement of English Nationally and in Nakuru County doesn't portend well, for it limits the learners from realizing their full potentials, and the Kenyan Nation from achieving its development agenda as envisaged in vision 2030. It's on this premise of persistently low achievement of English yearly that this study sought to fill the gap and examine the effect of cooperative and conventional learning approaches on academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

1.3 Purpose of the Study

The purpose of this study was to investigate the effect of cooperative learning approach on academic motivation, classroom environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

1.4 Objectives of the Study

The study was guided by the following specific objectives;

i. To determine the effect of cooperative learning approach on academic motivation in English in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

ii. To examine the effect of cooperative learning approach on classroom environmental perception in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

iii. To establish the effect of cooperative learning approach on academic achievement in English in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

iv. To establish the moderating effect of gender on relationship between learning approaches and academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

1.5 Hypotheses of the Study

In order to achieve the above objectives, the following hypotheses guided the study;

H01: There is no statistically significant effect of cooperative learning approach on academic motivation in English in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

H02: There is no statistically significant effect of cooperative learning approach on classroom environmental perception in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

H03: There is no statistically significant effect of cooperative learning approach on academic achievement in English in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

H04: There is no statistically significant effect of gender on the relationship between learning approaches and academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

1.6 Significance of the Study

The study examined the effects of using Cooperative Learning as a teaching Approach which would make English learning easier and clearer to the students. It was found that there was statistically significant effect of cooperative learning approach on students' academic motivation in English, students' perception of classroom environment and students' achievement in English in public co-educational county secondary schools in Nakuru, County Kenya. The study further found that gender of the students had a statistically significant moderating effect on the relationship between cooperative learning approach and students' perception of classroom environment as well as students' achievement of English in public co-educational secondary schools in Nakuru, County Kenya. The findings of this study may encourage teachers to be creative by adopting and using Cooperative Learning Approach as opposed to the conventional teaching methods and hence help improve Students' performance in English in Nakuru County.

Moreover, the Kenya Institute of Curriculum Development (KICD) may take into account and incorporate Cooperative Learning Approach as a method of teaching English in secondary school. The study has drawn the attention of the quality assurance and standards department to advise English teachers based on the information provided by these findings on the need of having an interactive learning environment that encourages cooperative behaviour such as group work, taking duties, listening to other students' views and turn taking. These skills are very vital as they would enable high and low ability students to share and learn from each other, thereby underscoring the importance and usage of Cooperative Learning Approach as a teaching method in improving teaching standards in secondary schools. Further, and more importantly, the findings of this study and recommendations thereto are valuable and of essence in

informing debates on and strategies for the effective implementation of the ongoing reforms and shift to the Competence Based Curriculum (CBC). This is because Cooperative Learning Approach is and shall largely remain central in pre-service teacher training curriculum at teacher training colleges and universities. Moreover, this study has generated, documented and presented objective and compelling research data that is likely to not only stimulate further studies on the appropriate approaches to be used in teaching of English, but also thrust to the fore student motivation and student perceptions of their classroom environment as critical indicators that must be taken into account in any efforts and strategies aimed at improving learner achievement in the English subject.

1.7 The Scope of the Study

The research study was carried out in public coeducational county secondary schools in Nakuru County, which formed the geographical scope. Cooperative learning approach may be implemented to serve several objectives. However, in this study, the researcher was only interested on the effect of Cooperative Learning Approach on academic motivation, classroom environmental perception and academic achievement in English which formed the content scope. The sampling scope of the study included all form three students in five Public Co-Educational County Secondary schools in Nakuru County, Kenya. This study was carried out for a period of four weeks and thus the time scope.

1.8 Limitations of the Study

The study was affected by:

i. Creativity variation among teachers hindered the use of cooperative learning approaches during instruction; this was dealt with by offering an induction course to the English teachers who were used in administering the treatment to the students in the experimental groups (E1 & E2). Through induction course,

all the teachers were at par in regard to the creativity needed for the cooperative learning.

ii. The area under study is small and may not give a general view of the whole country Kenya thus the results should be generalized with at most caution.

1.9 Assumptions of the study

The study was based on the following assumptions:

i. The schools would carry out their normal functions without any interference from external factors during research time and hence the learning environment in the four sampled schools would be comparable.

ii. That Cooperative Learning Approach was not in use as a method of teaching English in the sampled public coeducational secondary schools of Nakuru County, Kenya. Lack of use of Cooperative Learning Approach prior to the study in the sampled schools was also used as inclusion criteria.

iii. It was also assumed that the participating teachers applied the treatment with due diligence and performed at the same level in all the sampled schools. These teachers were inducted on how to carry out the experiment.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The focus of this chapter is to examine relevant research-based literature on the effect of cooperative learning approach on students' academic motivation, classroom environmental perception and achievement, with specific emphasis on learning of English subject. Further, the Chapter presents the theoretical framework that underpins the study. Finally, the conceptual framework applied in this study is outlined.

2.2 Overview of Cooperative Learning Approach (CLA)

Many efforts have been made to expound on the meaning of cooperative or collaborative learning (CL). In a study that was done by Kagan and Kagan (2009) it was established that cooperative studying was an established fundamental form that was used with team challenges, reproduced in any learning environment. Slavin (2011), and Farzaneh and Nejadansari (2014) in the findings of their study stressed essentially on the importance of teamwork cooperative learning. CLA involve students working in small cohorts with multiple potentials, prowess and backdrops. The teamwork together as a group in order to finish assignments and achieve apportioned objectives. Conventional learning environment assumes that individuals only achieve their goal if any of their team members dropped, whereas in cooperative learning it is the opposite because Cooperative Learning Approach entailed a win for all group members in any assignment allocated.

Existing research showed that during teaching in the classroom, many teachers often found themselves in "teacher-centered" teaching mode. Otieno (2011) found that students in those lessons, for such teachers, were merely imagined objects and their

behaviour basically passive. It was further revealed that control between the teacher and student was considered to be a subordinate relationship. In Africa, researches on expansion of verbal expression methodology and language instructing have unswerving relationship to society, cultural objectives and situations for research of 'neighboring' sciences philosophy, psychology, education, linguistics, anthropology and social sciences (Piippo, 2009).

There are other scholars in the field of language and literature who disapprove the position taken by African governments on matters concerning language blueprints and decisions made pertaining to having foreign languages as an option of teachings cited in Barasa (2010). Barasa (2010) opined that the current instructional language blueprints and norms in Africa do contribute to the establishment of the state of affairs. Rubagumya (1994) submitted that the African continent's language blueprints should have a connection between ability and language and should endeavor to re-examine usefulness affiliated with local and foreign languages. The significance of English language competency accession for all Nigeria school disciplines cannot be exaggerated because there is rarely any school subject that the instructions are not written in English language.

Research by the Commission on Behavioural and Social Sciences and Education (1999) found that more time was spent in evaluating and polishing on the fundamental beliefs that in the actual learning environment. The commission sought to find out how distinct applications and engagements in classes affected the usage of the theories and beliefs. In contrast to a conventional learning approach, cooperative learning approach setting demanded that the teachers to behave as a coach, moving from one point to the other while in class and kept an eye on the cohort engagements. The teacher should be at the

periphery, while supervising the team members with occasional assistance in responding to student queries (Polityka, 1999).

Slavin (2006) argues that academic achievement was reliant on more than personal inputs and endeavors. The study further established that learning environment in which teaching took place could improve or reduce traits associated with achievement. According to Caruthers (1994), students association with each other during learning or with the instructor could affect the student's views of the studying environment and their motivation to academic performance. This assertion was further supported by a research done by Gresser (2006) who noted that due to Cooperative Learning Approach's social peer interaction that enabled learners to achieve much of the stated goals, much was achieved through interpersonal interactions with fellow students.

Furthermore, Yusuf (2005) established that Cooperative Learning Approach activities had many functions in learning activities. For instance, it gave a lot of learners a chance to operate in cohorts, work and discuss in groups and ensured that all team members did everything from lesson planning and solving difficult challenges together. Slavin (2011) further indicated that gender differences did not have any influence on the educational achievement of learners in physics. While investigating a model of academic motivation that can be used by instructors to design courses that will engage students in learning, Jones (2009) examined the correlation of learners 'collaboration and competition and their perception toward education. The findings from the study made manifest that learner's collaboration promoted constructiveness and inspired students to learn unlike in competition strategies.

Johnson and Stane (2000) research found out that cooperative learning methods encouraged constructive feelings towards both instructional and active methods of

instructing science, and that learners exposed to cooperative strategies believed that they gained a lot from its lesson content unlike learners exposed to conventional approaches for instance competitive methods. The findings made known that more was achieved when cooperative strategies were used in teaching of learners.

Johnson and Johnson (2000) established that cooperate learning occurred even in large or huge classes of investigation and teaching in the discipline of education. They further asserted that learning occurred when learners worked and operated together to arrive at group objectives (Johnson & Johnson, 2000). In a Meta explication of 158 researches, Johnson and Johnson (2000) concluded that constructive learner achievement results were contributed to by and large through cooperative teaching approach. The outcomes of this research made manifest that cooperative learning was productive and promotive when contrasted with the entire or large classroom conventional teaching practices.

Alizera (2010) asserted that students taught in cooperative cohorts were more motivated and knowledgeable in their team at the time of looking for solutions to their challenges as compared to those instructed through conventional approach. The findings further established that, when incorrect answers were given by any individual member from the group, appropriate corrections was offered by the highly endowed group members. It was concluded that this kind of discourse and elaboration improved the engagement and interaction levels within the group associates and tended to add value to materials and activities that were being studied through cognitive explanation which existed during these discourses.

Gomleksz (2007) study results were in agreement with an earlier study that was done by Ghaith (2007) that made manifest on the effects of cooperative studying approach on English language students in contrast with the conventional learning approach.

Gomleksz (2007) examined the influence of student motivation on their class performance. Learners who were in the experimental cohort and were instructed through the conventional entire class instruction performed lowly, which hence proved the efficiency of cooperative learning approach with regard to the teaching and learning of English (Gomleksz, 2007; Ghaith, 2007). In addition, Ghaith (2001) averred that cooperative learning approach was appropriate and effective in improving the study of the prerequisites and pragmatics of a foreign language. Both researchers posited and concluded that the use of cooperative learning implemented through Student Teams – Achievement Divisions (STAD) model was applicable and effective in the teaching of English in schools. Ghaith (2001), concluded that the usage of cooperative learning approach in the instruction of learners had an upper hand than in personalized entire class form of instruction because it improved cognitive academic results of learners. Wachanga and Mwangi (2004)concluded that Cooperative Class Experiment (CCE) students who were taught through CCE and had a lofty incentive to garner knowledge in chemistry unlike learners who were exposed through regular instruction methods. It is from the above reviewed studies that the current study sought to investigate the effect of Cooperative Learning Approach on secondary school students' academic achievement in Nakuru County.

2.2.1 Key Principles and Benefits of Cooperative Learning

Just like there is, some contention and debate around any practice fields, there is a lack of consensus on the way to change learning environments into cooperative classrooms. In a study done in Europe by Slavin, (2016) using high school students it was established that cooperative learning had the following components: constructive interactions that made every learner to recognize individual duty and responsibility as an important role in the team; individual responsibility where each student within the team was held

accountable in understanding the taught material made manifest and that team tokens made it possible for the team to work together. Slavin (2016) study on high school students also revealed that co-operative learning teaching methods improved students' learning by enabling them to help and work together in small groups. Slavin (2016) found that cooperative learning as a teaching approach to have created opportunities for learners to nurture teamwork spirit, engagements, linkages and collaborations with others that are needed in the current world.

Johnson and Johnson's (2014) found that cooperative learning activities contributed more to constructive feelings towards the taught activities than in competition or personalized approaches. Moreover, cooperative learning contributed more towards valued impacts on learner performance and in knowledge retention. Johnson and Johnson (2014) recommended the inclusion of five core principles to make cooperative learning effective towards teaching and learning environment. On the other hand, Slavin (2011) research advocated a different minimal number of possible key principles; nevertheless, a number of resemblances amongst their opinions allowed them to come into a common ground on principles and their important part in making triumphant cooperative study groups.

Constructive interrelationship or cohort objective: this took place in situations where students efficaciously labored as a group for a common objective and each learner knew that they would achieve group goals if their team members were able to achieve and realize individual goals. (Johnson et al., 2010).Group objectives gave students the needed encouragement to socialize and work along efficiently, however asking students to work as a group needed more ,because they ought to have been convinced of the need of shouldering and leaning on each other's achievement solemnly (Slavin et al., 2003), and

contributing towards the group's achievement. Never the less, constructive objective linkage was not enough to assure and create desired results in students. As stated by Johnson and Johnson (2014), various types of constructive interrelationship ought to have been included. For instance constructive reward interrelationship, Resource interdependence, role interdependence and identity interdependence which lead to positive and harmonious linkage among team members in the learning environment ended up in producing desired benefits (Johnson & Johnson, 2014).

Individual responsibility: The cohort's accomplishment largely depended on all participants' individual effort in acquisition of knowledge. (Johnson & Johnson, 2014; Slavin, 2011).Students were individually evaluated minus being given any aid, and they knew their duty was that of comprehending a task and correctly answering the assignment so as to positively present towards the groups achievement. Individual responsibility was easily sequenced and evaluation within a small group was done and they knew work results were for the good of the group unlike personal (Kagan & Kagan, 2009) for small group membership minimized chances of having joy riders.

Promotive encouragement: took place when students motivated and made possible each other's endeavors' to attain the cohort objectives (Johnson & Johnson, 2014). According to Kagan and Kagan (2009) instructors function was that of coordination of associations instead of being a source of information when all learners in a class labored on group assignment. Social skills: These were student competence that aided them to convey and interact well amongst themselves, these skills were needed in creating a team work environment required for creating success in the cooperative group (Johnson & Johnson, 2014).When learners did not have such competencies, teamwork ceased because they were not able to relate well and to reach common a consensus (Johnson & Johnson,

2014). Hence each learner in team had a chance of getting involved in finishing the task and learnt from the group members through forming of linkages.

Group processing: Inferred to the various contributions made by each member in attaining the teams objectives and engaging positively in order to realize the teams objectives, hence ended up attaining better performance as a group (Johnson & Johnson, 2014). It was from those five fundamental truths that this study was based and grounded upon which the research was analyzed on the structure and length in which Cooperative Learning Approach was applied in the circumstances of the investigation.

In examining the theoretical underpinnings of cooperative learning approach in Mathematics education, Kshetree (2019) sought also to examine its implications to learning. The study used meta-analysis and thus reviewing documents from past published articles. It was found that cooperative learning approach made learning creative, stimulated students towards learning, it was centered on the learners, made learning joyful, and gave students and teachers an opportunity to socialize and team building as well as making learning meaningful. According to Kshetree (2019), cooperative learning is characterized by cognitive development, development of meaningful learning, social interdependence, and motivational learning as well as change of behaviours among the learners.

Kshetree (2019) asserts that cooperative learning approach creates a positive attitude towards learning, promotes teamwork and work autonomy through group tasks. The author adds that cooperative learning approach enables learners to compare experiences, share ideas, ask questions and get tested on understanding. Cooperative learning approached was also noted to promote healthy competition among the learners as well as giving learning an opportunity to engage in turn by turn talking, combined reasoning and sharing of learning materials (Kshetree, 2019).

2.2.2 Co-operative Learning Approaches

There are five types of cooperative learning approaches, namely; student Teams – Achievement Divisions (STAD), Cooperative Integrated Reading and Composition (CIRC), Jigsaw, Group Investigation and Cooperative Scripting. These types are discussed in this section.

2.2.2.1 Student Teams – Achievement Divisions (STAD)

Slavin (2006) posits that students teams-achievement division involved learners being put into small mixed ability level group of between 4 to 5 boys and girls and of all nationality. The instructor taught and the learners operated from their groups in order to ascertain that all were benefiting. STAD was made up of a consistent rotation of instructing, group interactions of mixed ability teams and quizzes with recognition or other rewards provided to teams whose members succeed (Slavin, 2006). STAD consisted of a regular cycle of school procedures:

Teacher: Presents the lesson

Group activity: Students studied work materials in their groups in order to get competency of the content.

Test: Learners got individual questions.

Team recognition: Group scores were analyzed depending on the group's performance rewards, recognitions were awarded to the highest team performers. STAD was used in this research study.

2.2.2.2 Co-operative Integrated Reading and Composition (CIRC)

Cooperative Integrated Reading and Composition (CIRC) are holistic educational activities tailored for instructing, reading and writing in the upper elementary grades (Slavin, 2011). Students worked in groups of four members, cooperative learning teams

.Students interacted with content among each other including reading to one another, summarizing stories to one another, decoding and mastering main ideas and other comprehension skills. Slavin (2011)threestudies of the CIRC program found that positive effects on students' learning skills, improved scores on standardized reading and language tests.

2.2.2.3 Jigsaw

Slavin (2011) established that jigsaw learners were slotted into a six member group to work and discuss on educational activities that were divided into smaller units for each member. Slavin, (2011) in a modified approach of jigsaw II had students work in four-five member groups and all learners read a uniform passage, such as a short story. Individual learners got an area in which they became experts, and learners of a similar area conglomerated in expert teams to deliberate and later got back to their initial groups to instruct what they studied with other team members.

2.2.2.4 Group Investigation

According to Seetape (2003) group investigation was a full learning environment classroom where learners worked in minimal groups and made use of collaborative investigation, group deliberation, and collaborative organization. Learners were fixed into groups of between two to six. The entire class listened to presentations from all the groups about their solutions to the challenge.

2.2.2.5 Cooperative Scripting

Slavin (2011) found that a lot of learners became aware that it was pleasant to work together with their colleagues and analyze content that they had either heard or had been given to them by their instructors. Learners took turns and presented the condensed content to each other. Those learners who used this approach retained content more than

those who summarized individually (Seetape, 2003). Mondoh, (2001) asserted that some dissimilarities between both genders of students in academics had a relation with their gender genetics. However large quantities of information showed that the disparities recorded in an academic year such as learning to read and career options later on in education were largely contributed by gender-associated exposures at the learning and living environments. Based on these discussions about the various types of cooperative learning approaches, this study used STAD in its pursuit of seeking the effect of cooperative learning approach on student's academic motivation perception and achievement in the English subject.

2.3 Effect of Cooperative Learning Approach on Student's Academic Motivation

Several studies have been carried to find out the effect of cooperative and conventional learning approaches globally, regionally and in Kenyan context. Adams (2015), carried out a study to examine the effect of cooperative learning on the classroom learning in United States America. The study established that the use cooperative learning approach was associated to a number of advantages in the classroom learning. The study revealed that positive interdependence and individual accountability aspects of the cooperative learning improved the motivation of students towards learning classroom subjects. The study was carried out in USA and since the education system in USA is different from that of Kenya, the study there by presented a contextual research gap.

Focusing on academic motivation in economics subject, Amaka (2016) sought to examine the role of cooperative learning approach on the academic motivation of the students. The study used pre-test-post-test non-equivalent group research design. The sample size involved 1920 secondary schools students. Academic motivation in economics subject was measured using Economics Learning Motivation Scale (ELMS).

The study found out that cooperative learning approach resulted to higher motivation scores towards the subject among the students. It was further revealed that cooperative learning approach promoted and encouraged active engagement in learning, discovery learning, social interaction, learning by experience, learning by doing and self-motivation. The study recommended teachers to be equipped with cooperative teaching skills in order to improve the overall motivation of the students in class. The reviewed study having focused in Economics and the current study on English, there existed a conceptual research gap to be filled by the current study.

In Asia, Maria (2020) carried out a study to examine how drilling method of learning affected the motivation of the students compared to the use of cooperative learning approach. The sample size of the study comprised of 96 students and 48 key informants who included education administrators in 48 cities. Compared to cooperative learning approach, the study revealed that drilling method was demotivating to both the teachers and students in the English Subject. In respect to this, it was revealed that drilling method resulted to boredom, lack of interest and focus as well as creating monotony among the learners and teachers. It was further shown the drilling method was not innovatively implemented and that it was forcefully do and had no fun compared to cooperative learning method. However, it was revealed that some drilling methods were useful for student learning. These included; repletion, tense formation, spoken language and memorizing some grammatical structures. The reviewed study focused on drilling method as a control group while the current study focused on lecture method as a control group and thus creating a conceptual research gap.

A study in Guillermo Cano National Institute, Godoy et al., (2019) sought to establish the effect of cooperative learning approach on the development of fluency in English 9th

grade students. The study adopted a qualitative approach with a purpose of identifying the best learning strategy in order to develop fluency. The study found out that through the use of cooperative learning approach, the students were able to develop good communications skills. It was further revealed that revealed that the performance of the students in English improved while the student developed positive attitudes towards learning. It was further revealed that students were more motivated and less reluctant during the learning process. The study recommended for the use of cooperative learning approach in improving the fluency of 9th grade students. The reviewed student was done among the 9th grade students while the current study was done among the secondary school students and thus a contextual research gap. In addition, the reviewed study was based on only the fluency in English while the currents today majorly on all parts of English language, and thus conceptual research gap.

A comparative study was done by Sanaie *et al*., (2019) to compare the effect of Jigsaw and lecture teaching strategies on the academic motivation of nursing students in Iran. Using a quasi-experiment research design, Sanaie *et al.*, (2019) randomly assigned 94 nursing students in their fourth semester of their learning into either control or experimental groups. Experimental group was taught using Jigsaw method while the control group was taught using lecture method. The study was carried out for 11 months and comprised of seven sessions each lasting for two hours. After the experimental period, the study revealed that there were significant differences in the academic motivation between the experimental and control group. In respect to this, the study found out that nursing students taught using Jigsaw method had a higher academic motivation score compared to the nursing students taught using lecture method. The study by Sanaie *et al.*, (2019) was done at tertiary level of education while the current

study was done at secondary level of education and thus a contextual gap that was filled by this study.

Focusing on medical students, Shakerian and Abadi (2018) sought to find out whether jigsaw technique as a cooperative learning approach affected the motivation of the students. Quasi-experimental method was used by the study. The sample of the study comprised of 42 students and whereby 22 were in experimental group and 20 were in control group. The control group was taught using lecture method while the experimental group was taught using jigsaw technique. At 95% confidence interval, the study found that jigsaw technique had a statistically significant effect on the motivation of the medical students. The results showed that motivated students performed better than unmotivated students in their practical lessons. The study by Shakerian and Abadi (2018) was done in health sector and at tertiary level of education and thus creating contextual research gap.

Focusing on motivation towards learning English as foreign language, Alorabi (2019) sought to establish whether the 5Es model of cooperative learning approached impacted on students' motivation in Saudi Arabia. The study used quasi experiment research design whereby the control group was taught using the conventional methods while the experimental group used 5Es model. After 20 weeks of learning using the different approaches, it was found that students who were taught using the 5Es model were highly motivated compared to those of control groups. The differences in their motivation scores between the two groups were statistically significant. The reviewed study was done in Saudi Arabia while the current study was done in Kenya. The two countries have different education systems and content scope and thus a conceptual and contextual research gap.

In the context of England, Melnichuk and Osipova (2017) carried out a study that sought to establish the influence of cooperative learning on the academic motivation of learners. The study research design was based on quasi experiment. The study established that cooperative learning approach was beneficial to students. It was revealed that cooperative learning enabled the students in critical thinking and gave ideas on their understanding on various concepts. The opportunities provided by the cooperative learning approach motivated students' towards learning as opposed to the other conventional methods of learning. It was revealed that the students preferred cooperative learning approach more than any other learning approach.

Rowntree (2018) carried out a study to establish among other factors the influence of cooperative learning approach on the motivation of the female students in Abu Dhabi. Using quasi experimental research design, the study used 175 students who were taught using cooperative learning approach and 163 taught using conventional methods. This study found out that there were significant differences in the academic motivation of learners towards the learning of STEM subjects in Abu Dhabi. In respect to this, it was noted that students taught using cooperative learning approach had a higher academic motivation towards STEM subjects compared to those were taught using conventional methods such as lecture method. A study incorporating both female and male students was necessary for generalization purposes and thus the need for the current study.

Rachmah (2017) examined how Jigsaw method of cooperative learning approach affects the academic motivation of psychology students in Indonesia. The study adopted quasi-experiment research design whereby the Jigsaw method was applied in experimental group and lecture method in control group. Using t-test the study revealed that there was significant differences in the academic motivation of students between those who were

taught using Jigsaw method and those taught using cooperative learning approach. The level of academic motivation of psychology students taught using Jigsaw method was higher than the motivation scores of the psychology students taught using lecture method. The study further found that teaching methods were significant predictors of the academic motivation. Rachmah (2017) having focused on psychology students, the current study sought to fill the contextual gap created by carrying out a study among secondary schools.

In the context of Spain, Hortigüela-Alcalá *et al.* (2020) sought to establish whether cooperative learning approach was applicable in Physical Education (PE). Qualitative research methodology was adopted in the study. The study used interviews from 13 teachers of Physical education. The study revealed that majority of the teachers perceived cooperative learning approach as inapplicable in the context of physical education. Cooperative learning approach was rated the least of all other pedagogical models and did not have transversally on a social level. Physical education significantly differs with English subject in that the English subject is taught inside the class while the physical education is done on the field. In addition, the aspects of training in both subjects also differ. Based on the cited differences, the current study sought to fill the gaps.

Busser and Walter (2013)carried out a study involving first-year modern foreign languages students enrolled in German degree courses at two major universities in the United Kingdom. A longitudinal mixed-methods approach was employed in the study. The study used found out that a lot of reduction in inward motivation, studying and learning effort and self-efficiency among German, as a foreign language in the United Kingdom. Busser and Walter (2013) averred that in order to improve learning motivation

of EFL in university learners, certain instructional methods were suggested such as active learning, social unity and constructive interrelationship with the learning cohorts. Their study concluded that student motivation in a cooperative classroom environment showed that the effect of effort and attention given to different learning challenges. According to Saltymakov and Frantcuzskaia (2015) Cooperative Learning Approach groups emphasized in assigning of duty roles for learning outcomes and their inputs in the group were commensurate with the efforts put, hence it was easy to individualize and evaluate. The author added that the elements of Cooperative Learning Approach group work provided a means of initiating and giving student's inward motivation to learn.

Focusing on the learning of Malay Language, Mahamod and Somasundram (2017) sought to find out the effectiveness of cooperative learning approach on the motivation of students in secondary school in Malaysia. The study used a quasi-experimental research design in which 30 students were in control group and 30 students in experiment group. Tradition learning methods were used on the control group and cooperative methods were used on the experiment group. The study used questionnaires to collect data on the motivation and perceptions of students towards cooperative learning. The findings indicated that there were significant differences in the mean scores of motivation towards learning of Malay language between the experiment and control group. The study also that motivation of students towards learning of Malay language using cooperative learning was medium level while that of students using traditions learning methods was low. The study further noted that students using cooperative learning approach had positive perception towards learning of Malay language compared to those who used traditional methods of learning. The current study was evaluating the motivation towards learning English while the reviewed study was on Malay language and thus conceptual research gap.

In Ireland, Alraddadi (2018) sought among other variables to examine the role of cooperative learning approach in improving the motivation of students towards Biology.. The study adopted experimental research design and collected data by use of evaluation forms, team-assessment grids, questionnaires, self- assessment grids, pre and post-tests and interviews. The study revealed that through the use of cooperative learning approach, students were able to have positive perceptions towards the learning of Biology as compared to those taught using conventional learning approaches. The study further noted that there were significant differences in the perceptions of students in regard to practical work ($p< 0.01$), self- concept in biology ($p<0.01$) and their attitude towards importance of biology subject ($p< 0.05$). The study concluded that cooperative learning approach improved the social skills of students and also enhanced their attitudes and motivation towards the learning of Biology. The reviewed study focused on Biology subject while the current study focused in English subject which test different concepts and content and thus a conceptual research gap.

Focusing on motivation and creativity in English Language Teaching (ELT) in Iran, Marashi and Khatami (2017) used quasi experimental research design with both control and experimental groups. The control group was taught using conventional methods. The experimental group underwent 18 sessions each of 90 minutes using cooperative learning strategies of three-step- interview, think-pair-share, three-stay one-stray and roundtable. The Attitude/Motivation Test Battery (AMTB) and the Abedi-Schumaker Creativity Test (ACT) were used in both pre-test and posttest and the results compared for the control and experimental groups. The study found that cooperative learning approach had a positive effect of both motivation and creativity in English Language Teaching (ELT). The reviewed study was carried out in Iran whose education system differs with Kenya and thus the results from the study by Marashi and Khatami (2017) would not be

generalizable to Kenya and thus the need to fill this contextual research gap in the current study.

A study by Gokhale (2015), sought to establish the advantages of cooperative learning approach on students in respect to the learning environment. The study used both qualitative approach and quantitative approaches. The study revealed that in cooperative learning approach, students were responsible for one another's learning as well as their own. Thus, the success of one student helped other students to be successful. The study also noted that cooperative learning approach led to active exchange of ideas within small groups and this not only increased interest among the participants but also promoted critical thinking. The study further noted that cooperative teams achieved at higher levels of thought and retained information longer than students who worked quietly as individuals. The shared learning experience was found to give students an opportunity to engage in discussion, take responsibility for their own learning, and thus become critical thinkers. All these aspects were seen to improve the level of academic motivation of the students.

In Saudi Arabia, Chamisah (2013), carried out a meta-analysis cooperative learning approach advantages in teaching writing. The study found that learning writing by using cooperative learning makes the students easier in developing the ideas to write. This approach is more than just putting students into groups, but the students can work together, share in- formation, and they are responsible for completion of the tasks in group as well. Be- sides, in this approach, the students can transfer their information and knowledge to the others and help each other in getting the ideas to develop in written communication during teaching-learning process.

In addition to that in a study done in China by Sun and Zhang (2021)it was revealed that some students of higher institutions EFL in China showed that only 30% of participants reported an immediate improvement towards studying motivation after attaining their core English course requirement, which meant that there was a minimal level of inward motivation from the conventional teaching methods used. The reviewed studies were done in China using students of higher learning and thus presented the current study a contextual gap to fill by doing the study using secondary school students in Kenya. Administering of Cooperative Learning Approach in secondary schools would significantly differ with institutions of higher learning.

Tran (2014), carried out a study to examine the effect of cooperative learning in Vietnam schools. The study used quasi experiment and established among other aspects that cooperative learning improved the academic motivation of learners. The author noted that that leaner's who were taught using cooperative learning approach were self-driven in undertaking academic assignments. It was indicated that through the learning approach students were able to complete their assignments in time and demonstrated high ability if critical thinking. It was however noted that due to the requirement for students to excel in all stages of academic engagements, some students were academically demotivated.

In Ethiopia, Moges (2019) examined the effect of cooperative learning approach on the academic achievement of students in Arsi University. The sample size for the study was 330 students and 85 instructors. The study used questionnaires to collect data from the respondents. The respondents of the study revealed that through the use of cooperative learning approach, student developed positive attitudes and motivation towards learning of various subjects in the university. However, the study revealed that most of the students were not willing to participate in cooperative learning approaches and that the

university teaching materials were not developed in line with cooperative learning approaches. In addition, the cooperative learning approaches were not fully supported by the administrators and thus low utility in the university. The study was done in Ethiopia and university level while the current study was done in Kenyan secondary schools and thus a contextual research gap.

A study by Njenga (2018), sought to examine among other objectives the effect of cooperative learning on the academic motivation of students in mathematics. The study used quasi experiment research design with 31 respondents in the experiment group and 22 in the control group. The study revealed that cooperative learning approach through use of small groups encouraged learners to work together and accomplish shared goals and subsequently maximized theirs and others' potential. It was also found out that students who worked in cooperative groups were more engaged, more responsible in completing group assignments and more organized while working in their respective groups. The study further found out that there were significant differences in the level of academic motivation of students towards learning of mathematics. Njenga (2018), concluded that cooperative learning was effective in improving the academic motivation of students. Since the study was done in Mathematics, there is a research gap for a study to be done in other subjects which tests different competences. The current study filled this gap by examining the effect of cooperative learning approach on the academic motivation of students.

Using quasi experimental research design, Nyabiosi, Wachanga, and Buliba (2017), sought to establish the effect of cooperative learning approach in improving the performance of Kiswahili Language Comprehension in secondary schools Kisii County. The study revealed that the use of cooperative learning approach was a significant

predictor of academic achievement of students in Kiswahili Language Comprehension. In respect to this, the study found out that there were significant differences between the academic achievement of the students that used cooperative learning approach and those who used conventional methods of learning. It was concluded that cooperative learning was effective in improving both the academic motivation of students and the academic achievement in Kiswahili Language Comprehension. Since the reviewed study was done in Kiswahili Subject, there exists a research gap and hence informed this study to be done in the English subject due to differences in subject content yielding to possibly different results.

Using cooperative class experiment, Wachanga and Mwangi (2004)established that CCE contributed to students' higher motivation in chemistry in Nakuru District than the regular teaching methods, probably due to the goal structure of cooperative learning. The study further asserted that the teaching approach contributed to better learner to-learner and learner to instructor linkages thus improving learners' inspiration and performance in chemistry. Githua and Mwangi (2003) pointed out that the differences between learners in their mathematics educational motivation were as a result of a multiple of factors namely, childhood exposure towards achievement and failure in tasks of mathematics. According to Githua and Mwangi (2003), research study, many instructors suggested that teaching lowly inspired learners was an impediment to their work as teachers. For that reason, a thoughtful teacher devoted oneself to motivating the child in various ways in order to increase the interest and continuous desire to learn.

Njoroge and Githua (2017), carried out a study to examine the effect of the use of cooperative learning approach on the academic achievement of students in Mathematics in secondary schools in Kenya. Solomon-four-non-equivalent-control-group design was

used and a sample of 323 students. The experiment group comprised of 162 students while the control group comprised of 161 students. The study found out that the use of cooperative learning approach among the students resulted to an increase in the level of academic motivation. In respect to this, there were significant differences in the level of academic motivation towards performing Mathematics tasks in class between the students using cooperative learning approach and those using conventional methods of learning. The study recommended the use of cooperative learning approach in order to change the negative perception of students towards Mathematics Subject.

Focusing on Biology subject in secondary schools, Muraya and Kimamo (2017) established the influence of cooperative learning approach on the academic achievement in the subject. The study used Solomon-four-non-equivalent-control-group design and comprised of 183 form two students from secondary schools in Machakos County. The study revealed that there were significant differences in the mean scores of the students in Biology tests between the students taught using cooperative learning approach and those taught using regular methods of teachings. In respect to this, the study revealed that the students taught using cooperative learning approach were more motivated towards learning Biology subject compare to those taught using the regular methods. The study concluded that cooperative learning was effective in improving the academic motivation of learners in Biology Subject.

2.4 Effect of CLA on Students Perception of Classroom Learning Environment

A study by Altun (2015) sought to establish among other aspects the perceptions of teachers in the use of cooperative learning approach in Turkey. The study involved 20 students in a quasi-experiment. The study found out that teachers had negative attitudes towards the use of cooperative learning. The study revealed that while in college,

teachers were not trained in the use of Cooperative Learning Approach in their teaching. It was further revealed that teachers found it hard to evaluate students through the use of Cooperative Learning Approach and that teachers were unable to recommend on the performance of students in the small groups. The study also established that teachers felt inadequate to share information in their small groups and this posed a challenge to the use of Cooperative Learning Approach in class teaching.

In Abu Dhabi, Saudi Arabia, Rowntree (2018) sought to establish the relationship between perceptions of learning environment and the cooperative learning environment. The study used pragmatist paradigm and comprised of 338 female students. This comprised of 175 students from classes that had implemented cooperative learning approach (experimental group) and 163 students from classes that had not implemented cooperative learning (control group). The study realized that there were statistically significant differences in the perception of learning environment between the control and group. In respect to this, students taught using cooperative learning approach had positive learning approach compared to those who were taught using conventional methods. The current study was carried out to fill the research gap realized in the reviewed study that only focused on female students and thus limited in generalization.

Premo *et al.*,(2018) carried out a study in United States of America to examine how cooperative learning approach influences the interaction and perception of students towards learning environment. Quasi-experimental research design was used. A sample of 251 was used for the experimental group and 234 for the control group. The study used modified Jigsaw model of cooperative learning approach on the experimental group and use of conventional teaching method on the control group. The study established that students who used cooperative learning approach fostered good management and had

more positive attitudes towards learning in the classroom compared to those who used conventional methods of teaching. However, it was noted the level of interaction among the students and teachers did not significantly predict the academic achievement of the students.

Katawazai and Saidalvi (2020) carried out study to examine students' perception towards classroom learning among students learning English as foreign language in Afghanistan. The study sampled 165 undergraduate students whereby questionnaires were the primary data collection tool. The study revealed that the study participants had positive attitudes and perceptions towards the cooperative learning of English as a foreign language. The study found that cooperative learning approach increased the classroom participation among the learners as opposed to conventional methods of learning. The reviewed study was done in Afghanistan while the current study was done in Kenya and thus a contextual research gap due to differences in the education systems of the two countries.

Focusing on teachers' perceptions in the use of cooperative learning approach in USA and using a sample size of 54 teachers who taught using cooperative learning approach, Sharan (2018), noted that teachers had positive perceptions towards the use of cooperative learning approach in their classes. Majority of the respondents indicated that cooperative learning was a valuable instructional approach because students remained actively involved and found solutions to problems within the small group discussions. It was also noted that peer interaction in the use of cooperative learning approach helped students to obtain a deeper understanding of the concepts taught in class. While others indicated that cooperative learning approach placed too much emphasis on developing students' social skills. The study also established that some teachers were of the opinion that cooperative learning approach was appropriate only for the bright students and therefore unhelpful to academically weak students.

Focusing on collaborative learning methods in Spain, Costa et al. (2020) examined the benefits of cooperative learning approaches on the perceptions of learning environment of both teachers and students. The study used quasi-experimental research design and quantitative approach to collect, analyze and report the findings of the study. The results of the study revealed that the learning environment was more motivating to the learners as well as the teachers. In respect to this, it was noted that there was an increase in the relationships and interactions between teachers and students, teachers and content, students and content as well as the relationships among the students. It was further found out that through collaborative learning approach, there was an increase in pedagogical collaboration among the students as well as autonomy in learning. The students' perceptions of learning environment improved under cooperative learning approach and students viewed as conducive for problem solving, critical thinking and improved time management of both teachers and learners. The revealed study was based in Spain whose education system is different from the Kenyan education system and thus this created a contextual research gap that the current study sought to fill.

In the context of Australia, Vladimir and Salinas (2016) carried out a study to examine the perceptions of cooperative learning class environment among the teachers. The study used case study research design and its data was collected by the use of questionnaires, focus groups discussions and interviews. The study revealed that teachers perceived cooperative learning as beneficial in improving the critical thinking of the students as well as developing their social skills. The teachers also noted that the cooperative learning approach improved their teaching practices. The study further established that majority of the teachers felt that cooperative learning reduced the workload of teachers. Since the study was done in Australia whose education system is different from Kenyan,

the study presented a research gap that was filled by carrying out a study in the Kenyan education system.

A qualitative study was conducted by Keramati and Gillies (2021) to establish the challenges that faced cooperative learning approach in classrooms in Iran and Australia. The study sampled 10 classrooms from University of Queensland in Australia and University of Tehran in Iran. Thematic content analysis approach was used in the analysis of the data. The study revealed that students were unfamiliar with their expectations in using cooperative learning approaches. It was also found that there were challenges in grading performance while using cooperative learning approaches. Another challenge included different cultures among the students and thus limiting the interaction of students in cooperative learning approach. Previous education and teaching methods of students prior to the introduction of cooperative learning approach posed a challenge to the students.

Specifically in Iran, Keramati and Gillies (2021)noted that gender of students, unequal opportunity, abuse of class freedom, lack of circular chairs, low motivation of students, noise in the class and other irregularities, lack enough educational space, and discussion of matters outside the content scope in groups were major challenges. On the other hand, the study found that major challenges in Australia were presence of different cultures from different students as well as language barrier for international students that limited the use of cooperative learning approach. The reviewed study having used qualitative approach only and that it was done in Iran and Australia, creates both methodological research gap and contextual research gap. The current study filled this gap by carrying out a study in Kenyan context and using both quantitative and qualitative research approaches.

Williams (2018) examined among other objectives the perceptions of the students and teachers in the use of cooperative learning approach in teaching in college levels. The study collected its data by the use in-depth interviews. The study established that students liked cooperative learning approach for it developed their social skills and inter-personal communication skills during the debates and small group discussions in the class. The study also revealed that the students had positive attitudes towards learning the subjects that were taught using cooperative learning approach. This study however was done using college level students while the current study was done using public co-education secondary schools level and therefore a contextual research gap.

In Spain, Cañabate et al., (2020) analyzed the perception, mainly on motivation, interpersonal relationships, and learning outcomes, of higher education students from seven university disciplines derived from cooperative learning (CL) activities undertaken in the course of their degree studies. The study used cross-disciplinary dimensional analysis. The study was carried out using a questionnaire validated by a number of CL experts. The subsequent analysis of a sample of 162 student's perceptions on the CL dimensions provided first, positive students' perceptions regarding satisfaction, motivation, learning outcomes, and interpersonal relationships, and second, that differences between university degrees on CL were significant, suggesting a strong dependence of cooperative dimensions on the implemented approach

While using descriptive research design, a study by Page (2017) in New Zealand sought among other objectives to establish the perceptions of both teachers and students in the use of cooperative learning approach. The study established that students indicated that cooperative learning approach was beneficial to them in developing social skills and their behaviours. Teachers on the other indicated that the use of cooperative learning

made teaching interesting and they were able to cover course content in relatively short period time. It was however noted that teachers were of the opinion that cooperative learning approach needed a lot of time in preparing and organizing groups as compared to conventional methods. Tapper examined whether or not English teachers in Sweden, working in the context of upper-secondary school, actually perceive teaching strategies to be as helpful as research shows. To explore this topic and hypothesis, three semi-structured interviews were conducted. The study found out that teachers preferred student centered approaches of teaching since students were able to master the content of the syllabus.

In a study by Gillies (2016) to review developments in research and practice on cooperative learning and to examine the factors that help to explain its success using meta-analysis approach established that majority of teachers in Australia preferred to use cooperative learning approach as opposed to the other conventional methods of instruction. It was however established that there were negative attitudes in the use of the approach due to the small class sizes for the implementation of cooperative learning approach. Others indicated that the use of cooperative learning approach resulted to a noisy classroom. Other negative experiences in the use of the Cooperative Learning Approach as indicated by the teachers was too much preparation time for a class in the event of use of cooperative learning approach. Other respondents indicated that Cooperative Learning Approach gave too much responsibility to the students.

In Newcastle in Australia, Ferguson-Patrick (2020) carried out a research to examine how cooperative learning approach affected the classroom perceptions of learning among culturally diverse students. The study was qualitative in nature and the data for the study was collected using teacher interviews and observation guides and checklists. The study

revealed that cooperative learning approached promoted social skills among the learners and positive thinking and perceptions towards learning. The study further found that shy students were encouraged to share and contribute to learning through group discussions. The author also noted that through the cooperative learning approach, students developed positive and effective engagement skills. In respect to this, it was noted that cooperative learning approached promoted inclusivity among culturally diverse students. Qualitative research design adopted by Ferguson-Patrick (2020) could to establish whether the effect of cooperative learning approach on classroom perceptions was statistically or not. This created a methodological research gap and that current study sought to fill.

Gokhale (2015) sought to establish the advantages of cooperative learning approach on students in respect to the learning environment. The study used both qualitative approach and quantitative approaches. A nonequivalent control group design was used in this study which was done among undergraduate students in industrial technology, enrolled at Western Illinois University, Macomb, Illinois. The study revealed thatin cooperative learning approach, learners achieved higher levels of thought and retained information longer than students who worked quietly as individuals. The learning environment of students in cooperative approach was found to be a great booster of students' academic motivation and development of social skills. The shared learning environment was found to give students an opportunity to engage in discussion, take responsibility for their own learning, and thus become critical thinkers. Students further indicated that cooperative learning made learning experience more interesting.

Comparing the learning environment provided by cooperative learning approach and the conventional methods of learning, Çolak (2015) noted that cooperative learning approach provided a friendly learning environment more than conventional methods. It was in this

respect established that through cooperative learning, students were able to interact more freely in discussing the classroom-taught concepts as opposed to conventional methods where students remained quiet while the teacher taught. In the Cooperative Learning Approach classroom environment, teachers freely interacted with the students in discussing the various concepts that students engaged in small groups. Students enjoyed the subjects that were taught using cooperative learning approach more than they did for those taught using conventional methods.

The study by Altun (2015) sought to find out the effect of cooperative learning on the students. One of the aspects that the study sought to establish was the effect of cooperative learning approach on learning environment of students. The study used quasi experimental research design to achieve the study objectives. It was revealed the cooperation based learning-teaching environment provided cooperation, supported permanent learning, provided opportunities to be successful, and contributed to the development of social and personal skills. However, the cooperative learning environment was found to cause worry as it required students to be successful at all stages. The study was done in Turkey while the current research study was done in a Kenyan context and thus different education systems and structures and thus new knowledge in respect to Kenyan education system and educational structures.

A study by Sharan (2018), sought among other aspects to establish the influence of cooperative learning approach on the learning process of students in secondary schools. The study revealed that Cooperative Learning Approach was a contributor of improving the image and learning atmosphere of the classroom and thus contributed meaningfully to the subject learnt. The study found out that through the use of cooperative learning approach, students from different cultures were not viewed as problem or risk but as

source of learning. Through the use of Cooperative Learning Approach, students were able to harness cultural differences in the pursuit of learning goals in an environment that showed respect for all contributions from different learners. It was also found that cooperative learning provided conditions in which students from different backgrounds got assisted in learning and therefore creating mutual dependency among the students. The study concluded that classroom environment created in cooperative learning approach was more beneficial to both the students and the teachers.

In Russia, a study by Saltymakov and Frantcuzskaia (2015),sought to find out the effect of cooperative learning approach on the students. Using a sample of 54 students, the study established that there were several benefits achieved through the use of cooperative learning approach. One of the benefits that the study highlighted was that students from different backgrounds and abilities were able to gain status and acceptance among their peers. It was also noted that Cooperative Learning Approach resulted to teachers and students from different backgrounds realizing that different interests, values, and abilities from group members were greatest assets that enriched the class's pool of resources to expand knowledge.

Focusing on secondary schools in Pakistan, and in investigating the effect of cooperative learning approach on the students' learning environment, Nawaz, Hussain, Abbas, and Javed (2014)highlighted different benefits of the approach. The study noted that cooperative learning approach created a culturally sensitive classroom environment whereby learning was made relevant for all. The approach of learning created a sense of community through interactive activities that developed interpersonal communication and helping skills required for learning together. It was further established that cooperative learning was used to redress problems relating to the loss of a sense of

community that many immigrants felt in their new countries. The study recommended the use of cooperative learning approach in all schools in Pakistan.

Almulla (2017) carried out a study on collaborative studying on instructors' and learners' perceptions and classroom practices in Saudi Arabia. The study used questionnaires and classroom observations and involved 97 students and 10 teachers. It was found out that a majority of learners made constructive feelings towards Cooperative Learning Approach than to lecture-style lessons. The outcomes of the research recommended that Cooperative Learning Approach assisted instructors in changing their perceptions on their duties as teachers' authority and roles in the learning environment.

Chim (2015)that reviewed literature on cooperative studying strategy on student team achievement division, the study results proposed that retention rates increased with respect to learner participation. It was further recommended that the rates were better in group works which involved team deliberations, being pragmatic and instructing team members on the essence of studying. Bataineh (2015)that examined on strategies of cooperative learning namely: think-pair-square, think-pair-share, jigsaw methods, and collaborative team inquiry, it was established through the study recommendations made manifest that learners ranked in cooperative learning were highly regarded, than those exposed in conventional methods for teaching knowledge. Cooperative learning created constructive interactions with their fellow colleagues and thus ensured that their views were used in peer forums.

Obinna-Akakuru et al., (2015) carried out a study to examine among other aspects, the advantages of cooperative learning approach in Nigeria. The study found out that cooperative learning approach was a source of resource for both students and teachers. The study established that through the use of cooperative learning approach, different

worlds of different people met and obtained information on ethnic background and history of communities. The study also found out that teachers were able to gain understanding of different communities through the classroom discussion and use the knowledge to teach in the class.

A study by Gull and Shehzad (2015) indicated that there was a significant relationship between the learning environment and the academic achievement of students in secondary schools. The study findings revealed that cooperative learning approach provided a conducive environment for students to raise their ideas, argue about their viewpoints and also asked questions for clarification. These aspects were associated with high academic achievement scores. The study concluded that cooperative learning approach was essential in building on the social skills of the students as well as communication skills in diverse contents of learning.

A study by Oludipe and Awokoy (2015) was carried out to examine the influence of cooperative learning approach on the improvement of academic achievement in students in Nigeria. The study focused on Chemistry Subject in secondary school level of education. The study used Solomon Four research Design for Non-Equivalent groups and established that there were significant differences in the level of academic achievement between the students taught using the conventional methods of teaching and those using the cooperative learning approach. It was further found out that cooperative learning was effective in improving the level of academic achievement in the students in learning Chemistry as well as undertaking examinations in the subject. The study also noted that students had favourable perceptions of Chemistry subject through the use of cooperative learning approach. The reviewed study was done in Chemistry Subject while the current study was done in English Subject and therefore a conceptual research gap due to divergence of subject metrics.

Keter, Wachanga, and Anditi (2017) carried out a study to examine on the effect of using cooperative learning in teaching chemistry in secondary schools in Bomet, County. The study used quasi experiment research design. The study found out that majority of the students strongly agreed that they did not feel nervous using cooperative learning approach. The study further established that learning using cooperative learning approach in class was enjoyable. Majority of the students also indicated that they were likely to choose subjects in secondary school based on the method of teaching. In respect to this, the study established that subjects that were taught using cooperative learning were highly preferred to during subject selection.

In addition to that, a study by Keter (2018) investigated the effect of cooperative learning on the skill acquisition, perceptions towards Chemistry subjects and academic achievement of students in secondary schools in Kenya. The study established that through the use of cooperative learning, they found out that learning activities were enjoyable compared to extra-curricular activities. It was further revealed that the use of cooperative learning approach was liked by majority of the students and therefore resulting to more hours being spent in academic activities rather than other activities in the school. The study also found out that in using cooperative learning, students were able to achieve more active learning outcomes than when using other conventional methods of teaching. The study recommended the use of cooperative teaching approach as an effective instructional method.

In another study by Jepkosgey (2018), on the effect of cooperative learning approach in the learning of English Language speaking skills in Nandi Central Sub county, it was established that cooperative learning affected the students perceptions towards learning. The study revealed that through the use of cooperative learning approach, students were motivated towards learning English. In respect to this, the study established that the

students liked the subject more than they could be found speaking in English even outside the class. A majority of the students indicated that they enjoyed learning when they were let to discuss in small groups as opposed to lecture-based teaching. The study concluded that cooperative learning was effective in improving the perceptions of students towards speaking in English in secondary schools in Nandi Sub-County.

Moreover, Omao (2017) carried out a study to establish teachers' perceptions in the use of cooperative learning approach in teaching of Christian Religious Education (CRE) in Nakuru County. The study was based on a descriptive survey research design which had sampled 42 CRE teachers. The study established that majority of the teachers indicated that the cooperative learning approach was appropriate for teaching CRE subject. The teachers further indicated that they were not pressured to use the approach rather they used it willingly in order to improve the performance of teachers. However, a majority of the teachers indicated that implementing cooperative learning took too much of class time.

According to a research study by Njoroge and Githua (2017), on the effects of CLS on learners' mathematics achievement by gender, they found out that it reduced gender disparities in learners' performances in mathematics. The cooperative learning approach showed that it was efficient in improving mathematics attainment in both cases of gender than the conventional instructing approaches. The instructing method addressed gender disparity gap in learners' performance in mathematics which was as an outcome of instructors shifting strategy from teacher centered to that of guiding, explaining issues and arranging the students, (Njoroge & Githua, 2017). However in Njoroge and Githua (2017), there research findings indicated that both genders seemed to benefit equally while learning mathematics in teamwork. The study further recommended CL to reduce disparities of both male and female performance in final mathematics examinations.

Wachanga and Mwangi (2004)assessed the impact of Cooperative Learning Approach in mixed high schools in Kenya. The assessment showed that while use of Cooperative Learning Approach in improved performance in Chemistry among boys and girls, the improvement among girls was higher than boys. However in Njoroge and Githua (2017), there research findings indicated that both genders seemed to benefit equally while learning mathematics in teamwork. The study further recommended CL to reduce disparities of both male and female performance in final mathematics examinations. According to Adamson (1997) research study, girls actively took part in team work discourses with the same zeal as boys, which showed that study materials affiliated to the sciences taught in multimedia approach did inspire both genders. The multimedia approach involved availing course content through information and technology devices. The improvised system of the software did indeed create an impetus in learners who had initially shown less zeal before exposure to the multimedia software (Adamson, 1997).

2.5 Effect of CLA on Students Academic Achievement

Existing research showed that during teaching in the classroom, many teachers often found themselves in "teacher-centered" teaching mode. Gull and Shehzad (2015), carried out a study to examine the influence of cooperative learning approach in Education Subject in public colleges in Pakistan. The research design used by the study was quasi experiment research design. The study used a sample of 62 female students who were issued with an examination on Education Subject after 8 weeks of experiment using cooperative learning as the experiment group. The study found out that students who were taught using cooperative learning approach had a higher performance as compared to those who were taught using conventional methods in the Education subject in the college. The differences between the two groups were found to be statistically significant. The study recommended that cooperative learning to be used in public

colleges in order to improve students' performance. While the reviewed study was carried out in Pakistan using college students the current study was done using high school students in Nakuru, Kenya and therefore the metrics of measurement in English language were different and incomparable.

Amaka (2016) carried out a study in Nigeria to examine among other aspects the effect of cooperative learning approach on the academic achievement of students in senior secondary schools. The study was majorly in Economics Subject. Quasi-experimental research design was adopted by the study. Economic Essay Test (EET) and Economics Achievement Test (EAT) were used as measures of academic achievement in Economics. The study revealed that students using cooperative learning approach achieved higher mean scores compared to those who did not use it. It was further noted the academic achievement of male students was higher than that of female students. However, there were no significant differences in the academic achievements of students from urban and rural areas when exposed to cooperative learning approach. Since the current study was based in English subject, the reviewed study on economics created a conceptual gap that the current study filled.

In America, Williamson and Garbin (2021) carried out a study to examine how cooperative learning approach affects the performance of students at the end of term exam as well as their ACT scores. The study sampled 216 students who were grouped in various groups in their learning using cooperative learning approach. The findings revealed that those students who worked within groups and in using cooperative learning approach performed better in their end of term examinations compared to those who used conventional learning approaches. It was also found that there were significant differences in the performance of the students between the students who used

cooperative learning approach and those who used lecture method. It was further shown that interactions in the student groups were significant predictors of performance as well as ACT scores. The reviewed study focused on broad aspects of performance in examination and ACT scores while the current study focused specifically on English Achievement and thus providing specific recommendations for both policy and practice.

In an exploratory study, Page (2017), which examined the barriers and enablers of the implementation of cooperate learning approach in New Zealand. It was established that teachers lacked better understanding of the structures of cooperative learning and this acted as a barrier to the implementation of cooperative learning in New Zealand. Other barriers were established to be poor social skills among the students and lack of enough time to create structures for cooperative learning and creation of discussion groups. The enablers of cooperative learning on the other hand included initial and continuous teacher training on the use of the cooperative learning, development of social skills of learners and corroborations between teachers from different schools. The study noted that those schools that were able to apply cooperative learning approach were able to achieve higher academic mean scores as opposed to the rest. However the study presented a contextual research gap for it was done in on the barriers and enablers of the implementation of cooperate learning approach while the current study was done in a on the effect of Cooperative Learning Approach on academic achievement. The study used explorative research approach that fails to establish linkages between variables of study as the current study sought to do.

In Iran, Namaziandost et al., (2020) sought to find the effect of cooperative learning approach on the development of EFL learners' speaking fluency. Sample sizes of 72 students were randomly selected from private institution teaching English as a foreign

language. The sample was divided into three groups; two experimental and one control, each consisting of 24 students. The control group was taught using conventional methods while the two experimental groups were taught using cooperative learning approaches; either think-pair-share or numbered heads. The study administered oral fluency pre-test and oral fluency post-test. The study revealed that the mean oral fluency score gains for the two experimental groups were higher compared to the control group. The study further found out that the differences in the mean oral fluency score gains between the experiment groups and the control group were statistically significant at 5% significance level. Since this tested the mean oral fluency in English only, there was a need to fill the research gap by carrying out a study on English grammar and oral poetry.

In Indonesia, Sulisworo and Suryani (2014) carried out a study to examine whether cooperative learning approached affected the academic achievement of students in Physics. A quasi-experimental research design was used and adopted a quantitative research approach. The study used two stay-two stray approach of cooperative learning. The sample size was selected using both purposive sampling and cluster sampling. From this, 36 students were in control group and 36 were in experiment group. At 5% significance level, the study revealed that cooperative learning using stay-two stray approach was a significant predictor of academic achievement of students in Physics. In respect to this, students that used cooperative learning approached had a higher academic achievement compared to those who did not. The reviewed study was done in Physics and tests different aspects from English language and thus a conceptual research gap that necessitated the current study.

In the context of Ireland, Alraddadi (2018) sought to establish the effect of cooperative learning approach on the academic achievement of students in Biology subject. The

study used experimental research design which comprised of 74 students. The control groups was taught using conventional learning approaches while the experimental group was taught using cooperative learning approaches. The results indicated that cooperative learning approach improved the academic achievement of students compared to the conventional learning approaches used on the control group. In respect to this, control group mean score was 56.6% while that of the experiment group was 85.4%. The results further indicated that there was a significant relationship between the achievement in biology and the method of teaching. In respect to this, there were significant differences in the academic achievement of student taught using cooperative learning approach with those taught using conventional methods. The study concluded that cooperative learning approached improved critical thinking of student and resulted to better higher-order thinking. The reviewed study presented both conceptual and contextual research gap. Contextually, the study was based in Ireland whose education systems differ with the Kenyan one. Conceptually, the reviewed study focused on Biology subject which tests different concepts and content masterly.

In Spain, Estébanez (2017)explored the effects of Cooperative Learning (CL) against Traditional Learning (TL) in academic performance of students in higher education in two groups of the first course of Computer Science Degree at the university. The empirical study was conducted through an analysis of covariance (ANCOVA) in order to assess whether teaching methods have a significant effect on academic performance. The results showed that teaching methods did not have a significant effect on the academic performance of the students. However, informal interviews with students revealed that they preferred CL. However, the results showed that students who were exposed to TL methods outperformed the students who were taught via CL in mid-term exam. However, the result is opposite in the final exam where students from CL obtained better

scores. Finally, with CL techniques students got better global results because they acquired a deeper understanding of the material.

A study was done by Huang et al., (2020) to establish the effect of cooperative learning approaching on the learning outcomes in natural sciences. Quasi-experimental study design was used. Personal learning was the control group while cooperative learning was the experimental group. The results of the study revealed that cooperative learning approach improved learning outcomes of the students and also made teaching interesting for the teachers. The results further revealed that through the use of cooperative learning approach cognitive load reduced significantly. Huang et al., (2020) having focused on natural sciences and the current study on English Language, there existed a conceptual research gap to be filled.

Inuwa et al., (2017) carried out a study in Nigeria to evaluate the effect of cooperative learning approach on the Financial Accounting Achievement Test (FAAT) among secondary school students in Gombe state. Quasi-experimental research design was used. The sampled students were divided randomly into two groups, that is, control and experimental groups. The control group was taught using conventional methods while the experimental group were taught using cooperative learning approach. The study found that there were statistically significant differences in the Financial Accounting Achievement Test (FAAT) between the control and the experimental groups. The study found out that the cooperative learning approach led to higher Financial Accounting Achievement Test (FAAT) scores compared to conventional teaching methods. The study recommended for the adoption of cooperative learning approach. The study by Inuwa et al., (2017) was done in Financial Accounting while the current study was done in English subject, there existed a conceptual research gap.

Guillén-Gámez *et al.*, (2020) carried out a study to examine the effect of cooperative learning approach on the academic achievement among pre-service teachers in Spain. The study was carried out in the Education Faculty in the University of Almeria in Spain. Quasi-experimental research design was used to collected data in which the sampled pre-service teachers were grouped into either control or experimental group. The study found out that pre-service teachers who were taught using cooperative learning approach performed lower than their peers taught using conventional methods. It was however noted that the perceptions of the teachers improved in the use of cooperative learning approach. This study was however inconclusive in explaining why cooperative learning approach improved students' perceptions towards learning while lowering their academic performance; and thus a research gap that the current study filled.

Focusing on Science and Technology courses, Altun (2015), carried out a study to examine the effect of cooperative learning approach on students' academic achievement in middle level of education in Turkey. The study involved 20 students in a quasi-experiment. Using t-test, the study established that there were significant differences between the academic mean scores of students using conventional learning approaches and those using cooperating learning approaches. It was in respect to this established evidence that cooperative learning approach resulted to better academic achievement results as compared to those taught using conventional teaching methods. The reviewed study focused on Science and Technology courses while the current study focused on English Subject and therefore a conceptual research gap I terms of subject content and thus different dynamics in Cooperative Learning Approach would be used.

In a study conducted in Vietnam, Tran (2014), sought to compare the effectiveness of cooperative learning approach and lecture-based approach in improving the performance

of students in academic mean scores for Psychology Subject at Giang University. The study used a sample size of 110 students whereby 55 were taught using cooperative learning approach and the other 55 were taught using lecture-based approach. The study found out that the students taught using cooperative learning approach outperformed those taught using lecture-based approach. It was concluded that cooperative learning was more effective in improving the performance of students in Psychology Subject. Since the study was done at university level, there existed a research gap for a study to be done at secondary school level. In addition, Psychology is contextually different from English and thus new knowledge was availed through the current study.

A study in United States of America by Sharan (2018) sought to establish the gains brought about by cooperative learning approach. The study used a sample size of 54 teachers who taught using cooperative learning approach. The study established that teaching using cooperative learning approach was preferred by teachers to other conventional methods of teaching. The respondents interviewed indicated that the use of cooperative learning approach improved the participation of students in academic activities and led to high academic mean scores by the students. Since the study by Sharan (2018), sought data from the teachers, there was need to get feedback from the students who are the recipients of the teaching approach and therefore the need to carry out the current study in Nakuru Kenya.

In India, Pandya (2017), carried out a study to examine the effect of the use of cooperative learning in teaching mathematics in secondary schools using quasi experimental research approach. The study sample was 161 students. The study established that cooperative learning approach was more effective in enhancing critical thinking skills required in learning mathematics as compared to conventional methods of teaching in secondary schools in India. In respect to this, there were significant

differences in the level of academic achievement in mathematics between the students taught using conventional methods and those taught using cooperative learning approach. The study recommended the use of cooperative learning approach in teaching Mathematics Subject in secondary schools in India.

Focusing on English Subject at Tomsk Polytechnic University in Russia, Saltymakov and Frantcuzskaia (2015), carried out a study to examine the influence of cooperative learning approach on student academic achievement. To achieve the study objective, Saltymakov and Frantcuzskaia (2015)used a quasi-experiment research design whereby Solomon Four Research Design for Non-Equivalent Groups was used. The study established that students that were taught using cooperative learning approach performed better than those that were taught using lecture-based approaches. The study concluded that there was statistically significant effect of cooperative learning approach of students in English in undergraduate and master's level.

Focusing on secondary schools in Pakistan, Nawaz, Hussain, Abbas, and Javed (2014), sought to establish the influence of cooperative learning on the academic achievement of students in the English Subject. The study used a sample size of 40 students and quasi experimental research design. Twenty students were subjected to cooperative learning approach while the rest were subjected to lecture-based approach. It was established that there were significant differences in the mean scores of the control and experimental groups. In respect to this, the study established that the experimental groups that were taught using cooperative learning approach outperformed those taught using lecture-based approach. The study recommended for the use of cooperative learning approach in secondary schools in Pakistan.

In Zambia, Gerald and Allan (2018)study was designed to determine the effect of cooperative learning on students' attitude and performance towards probability distributions in statistics. The design for the study was quasi-experimental control group pre- test and post-test design. The findings of the study revealed that cooperative learning improved students' academic performance in Probability Distributions in Statistics. Furthermore, the findings of the study revealed that cooperative learning approach increased student's positive attitude towards statistics in the experimental group as compared to the control group. Therefore, incorporating cooperative learning approach in teaching statistics was found to have a positive effect on enhancing students' performance and attitude towards statistics.

In Nigeria, Obinna-Akakuru, Onah, and Opara (2015), carried out a study to examine the effect of cooperative learning approach on the performance of students in English test. The study used quasi experimental research design and a sample size of 20 students. The study established that there were significant differences in the mean scores in English test between the students using conventional methods of learning and those using cooperative learning approach. In respect to this, the study established that students taught using cooperative learning approach achieved high mean scores in the English test as compared to those taught using conventional methods. The study recommended that secondary schools should use cooperative learning approach and teachers trained on the use of the teaching approach.

Alorabi (2019) carried out a study in Saudi Arabia to establish how 5Es model of cooperative learning influences academic achievement of learners. The study sampled 119 female undergraduate students pursuing English as a Foreign Language (EFL). The aspects of English taught using cooperative learning approach were reading, listening

and speaking and writing. The study period was 10 weeks which comprised of 20 sessions and each session was 3 hours. The results of the study showed that there were significant differences in the academic achievement of English as a Foreign Language (EFL) between the cooperative learning approach and conventional learning approach. In regard to this, it was found that students taught using cooperative learning approach performed better than those taught using conventional methods. Alorabi (2019) focused only on female students and thus limiting the generalization of the study findings and thus the need for the current study.

In Nigeria, Jamabo and Chikodi (2018) carried out a study to examine how the use of cooperative learning approach influences the academic achievement of students in Chemistry Subject. The study used quasi-experimental research design and whereby experimental group was taught using cooperative learning approach while the control group was taught using conventional methods. The study revealed that students taught using cooperative learning approach had higher academic scores in Chemistry compared to those taught using conventional methods. It was in addition found that male student performed better than female students. The study also noted that both Concept Mapping Instructional Strategy (CMIS) and Cooperative Instructional Strategy (CIS) instructional methods of cooperative learning approach were effective in improving the performance of students in Chemistry subject. Since the reviewed study was done in Chemistry which differs in content scope and degree of difficulty, the current study sought to fill the research gap by examine the effect of cooperative learning approach on the achievement of students in English.

Focusing on government Secondary Schools in Tanzania, Faustino and Muneja (2020) carried out a study to examine the effectiveness of cooperative learning approach on the

academic achievement of students in English Literature. The sample size of the study was 160 students who are randomly sampled and give questionnaires to fill. The study found out that most of the students strongly agreed that the cooperative learning approach was effective in enhancing the academic achievement of students. It was further revealed that there was a significant relationship between interest in learning of English literature and the achievement in the subject. It was recommended that cooperative learning approach to be used in the learning of English literature due to positive ratings in its use by the sampled students. The current study focused in English grammar and oral poetry which is different from English literature and thus opening a conceptual research gap.

A study by Chebii, Wachanga, and Anditi (2018), that sought to establish the effect of cooperative learning approach on the performance of students in Chemistry performance tests in secondary schools in Koibatek Sub-county. Solomon Four Non-equivalent Control Group Design was used as the research design for the study. The study sampled 489 form three students and administered Chemistry Achievement Test to them. The study revealed that there were significant differences in the academic performance in Chemistry test between the students who were taught using the cooperative learning approach and those who were taught using conventional methods. The study concluded that cooperative learning was effective in improving students' performance in Chemistry subject in secondary school level.

The study sought to establish whether cooperative learning has statistically significant effect on the performance of students in Mathematics in Spain. The study sampled 14122 students from the ages of 10-19 years. The study established that there were statistically significant gender differences in the performance of male and female students. In respect

to this, the study revealed that male students performed better in Mathematics compared to the female students. However, the study revealed the upon use of cooperative learning approaches, the performance difference in the two genders reduced. The study concluded that cooperative learning approach moderated the effect of gender on the performance of Mathematics. The reviewed study was done in Mathematics subject while the current study was done in Mathematics which differ in content and scope.

2.6 Theoretical Framework

The study was guided by the motivational theories and Slavin (2006) Research on Co-operative Learning.

2.6.1 Motivational Theories

Maslow's theory of growth affirms that as human beings satisfy 'immediate wants', they do look forward to gratifying consecutive 'elevated wants' which employed a pecking order (Hickey, 1997). Maslow's pecking order is usually portrayed as hierarchy which entailed physiological needs, safety needs, belongingness and love, esteem wants and personal fulfillment. Amalgamated as devoid wants are emotional wants that are under the four lower steps, whereas the higher step which is also referred to as growth wants are associated with the motivational needs. The primary principle is that lower needs must be fully gratified before looking for upper wants (Hickey, 1997). In order for CLA to be effective to the students, instructors need to comprehend career goals of the learners namely self-actualization, as well as basic and psychological needs. The importance of the hierarchical nature makes the teacher to be aware of the students' background which translates to positive motivation and higher achievement scores in English. In this study, the main concern is academic motivation, perception of classroom environment amongst secondary school students and how academic achievement in

English can be improved. Academic motivation is the emotional procedure which determines guidance, strength and persevering of traits associated with studying (Hickey, 1997). Motivation is a drive that arouses, selects, guides and maintains a trait (Wachanga & Mwangi, 2004). The following are some of the motivational approaches;

2.6.1.1 Instinct Motivation Approach

According to Wachanga and Mwangi (2004), psychologists first relied on biological reasons when explaining the concept of motivation. As maintained by the innate approach to motivation, human beings and animals are conceived with predetermined sets of behaviour that are vital to their existence. The instinct model emphasizes on the relevance of being traits, for instance close association between parents, children or lovers traits (Seda, 2016). However short coming to the concept of motivation is those psychologists are unable to agree to what constitutes primary instincts. Therefore in their attempt to address the weakness they came up with the theory of homeostasis (McClelland, 1987). Hohn (1995) in his homeostatic theory argued that primary drives initiated behaviour that was directed towards the goal of reducing the drive. The weakness of this approach is that it does not explain the motivation to perform behaviours other than those directly responsible for reducing biological tension.

2.6.1.2 Arousal Motivation Approach

This seeks to explain behaviour in the goal and it's maintenance of or an increase in excitement (McClelland, 1987). The approach emphasizes on getting the finest amount that is of moderate arousal which differs for different situations and for different people.

2.6.1.3 Incentive Motivation Approach

Incentives approach to motivation attempts to explain why behaviour is not always inspired by extrinsic powers, for instance need to lessen powers or sustain the finest

amount of feelings instead of having the focal point being inward components. Incentive hypothesis elaborates inspiration to mean aspect of external stimuli, the incentive that directs and energizes behaviour (Maslow and Lowsy, 1998). In addition to this, properties of extrinsic drive contribute to an individual's motivation. The major shortcoming of the incentive theory is that no elaborate explanation of motivation is given because human beings tend to satisfy wants even when inducements are not evident (McClelland, 1987). As a result, a lot of these psychologists averred that the inward powers lessening hypothesis correlate to external incentive theory to thrust and shove traits correspondingly (Seda, 2016). Rather than contradicting one another, desires and rewards work together in motivating a conduct (Seda, 2016).

2.6.1.4 Cognitive Motivation Approach

Dembo (2014), categorized the factors which influenced students' motivation into three categories: personal factors, classroom organization factors and teacher behaviour. In addition to that Slavin (2011) recognized three motivational factors associated to personal factors influencing behaviour: worth factors, which included students' objectives and interests of essential assignment; anxiety factor, that involved learners interests on capacity to tackle an assignment which involved, learners psychological response to the assignment. Slavin (2011) indicated the following: Students who become involved in a task with the purpose of mastering it, who found it interesting and who liked academic challenges were likely to engage in more cognitive strategies (value component). Learners that were thought to have the capacity of completing a task engaged in more cognitive strategies and persevered with the assignment than in learners with little interest (expectancy component) Students who had test anxiety or feeling of shame because of their inability to complete a task successfully tended to be ineffective learners and often did not use appropriate learning strategies (affective component).

The three observations above implied that instructors had a lot to learn with regard to their learners' motivation by observing learners behaviour to that of finding out their beliefs and self-perceptions regarding academic tasks. Seda (2016) noted that specific instructor behaviour and certain environmental teaching arrangement components did elicit a mastery goal orientation, thus changing students' motivational perceptions. There are six steps or dimensions which can be taken in the classroom in order to attain a mastery orientation (Dembo, 2014). The first one is task dimension which focused on designing learning activities, tasks and assignments that increased student interest and involvement in learning. The second step is jurisdiction component that entails giving learners' chances to execute personal duties and roles in studying. The third step is recognition dimension which was concerned with the official and non-official utilization of inducements and class glorification.

According to Ames (1992), the stated components become vital in developing learners' zeal towards studying. However, in a lot of learning environments it's taken for granted that contests motivated learners to perform well in tasks. This resulted in a lack of incentives, with a larger portion being offered to high ability learners. Low ability learners found it had to be awarded for their contributions and achievements. The fourth step is grouping dimension which focuses on students' ability to work cooperatively with others rather than competitively on school tasks. This study focused on this aspect of improving students' motivation. The fifth step is valuation dimension that involves the classroom procedures used to assess and monitor student learning that is the arrangement of the classroom environment and how it affected academic motivation to learn.

Gomleksz (2007) provided evidence that student motivation could be undermined by the evaluation procedures used in class. In developing a mastery orientation, students needed

to feel that errors are part and parcel of studying, and that opportunities were available to improve their work (Dembo, 2014). Time dimension was concerned with the task effectiveness, place where teaching is done and allotted period in which learning tasks are meant to be accomplished. A teacher should therefore consider both in his/her teaching strategy and should use learning activities that elicit learner's zeal and draw their impetus expectancy towards achievement of educational goals.

According to Dornyei (2015), motivation is a factor that more easily influences than the other contributing factors like creativity. There are six strategies that influence inward motivation: provocations, liberty, materials, and team issues, managerial and administrational input. Many researchers and scholars have underscored the need of teachers to consider motivational factors in their teaching. Carrier, (2011) indicated ways in which Maslow's motivation theory could be applied in teaching/learning situations and they pointed out that a teacher should: arrange classroom conditions to make students feel comfortable when working in groups and when asking questions; clarify general and specific objectives of the topic or lesson; encourage the learners to achieve; set attainable goals for learners and guide them there in making the study interesting by giving opportunities for activities investigation and socialization. Therefore a motivated student had an inward drive which powered, conveyed sustained and guided traits to the want or objective (DeCecco& Crawford, 1988). A lot of literature exists about the evolution and development of those methods and it was not the intention of this study to examine the content, strengths and weaknesses of the various language teaching methods, but the effects of CLA on students' academic motivation, perception and achievement in English subject.

2.6.2 Slavin's Research on Integrative Theory

Slavin (2011), posits that there are two critical hypothetical views associated to cooperative learning, motivational and perception. Motivational theories of CL stressed on the students being given rewards in order to engage in educational tasks. Motivational theories associated to CL looked on for rewards and objective issues while perception theories stressed on combining efforts towards work. Among the components of CL is constructive interaction, which entailed learners viewing their success or failure within the setting of the team effort (Johnson & Johnson, 2014). From a motivational point of view cooperative objective made success to be linked to group success (Slavin, 2011).Hence if individual objectives were to be achieved, learners had to motivate others in order to assist the group accomplish and aid each member of the team.

In addition to that, we have two perceptions theories that are used in CL, namely; developmental and elaboration theories (Slavin 2006).The developmental theory posited that engagements are effective as they increased their knowledge of important issues (Slavin 2006).Learners engaged with others, elaborated and discussed their points of view leading into a deeper comprehension of content studied (Slavin 2006).The fight to solve critical challenges using cooperative assignments lead to the growth of upper amount of comprehension of matters (Slavin 2006).On the other hand, elaboration theory recommended that efficiency entailed studying and elaborating content to other learners .CL materials improved explanatory reasoning, giving and receiving of elaborations which were key to improving of profound comprehension, degree of rationality and efficiency (Johnson & Johnson 2014).

This study therefore sought a theoretical framework based on an integrative theory adapted from Slavin (2000), according to whom six theoretical points of view associated with cooperative learning had established rationales and supporting evidence. These

perspectives are motivational, social cohesion, cognitive development, cognitive elaboration, practice and classroom organization. In addition to that Slavin (2006) observed that those perspectives are complementary to one another. Therefore, usage of cooperative learning approaches ought to result into enhanced student learning attitude, motivation, academic achievement and retention from the developmental, cognitive and integrative theoretical bases. A model of the relationships among these perspectives is diagrammatically shown below;

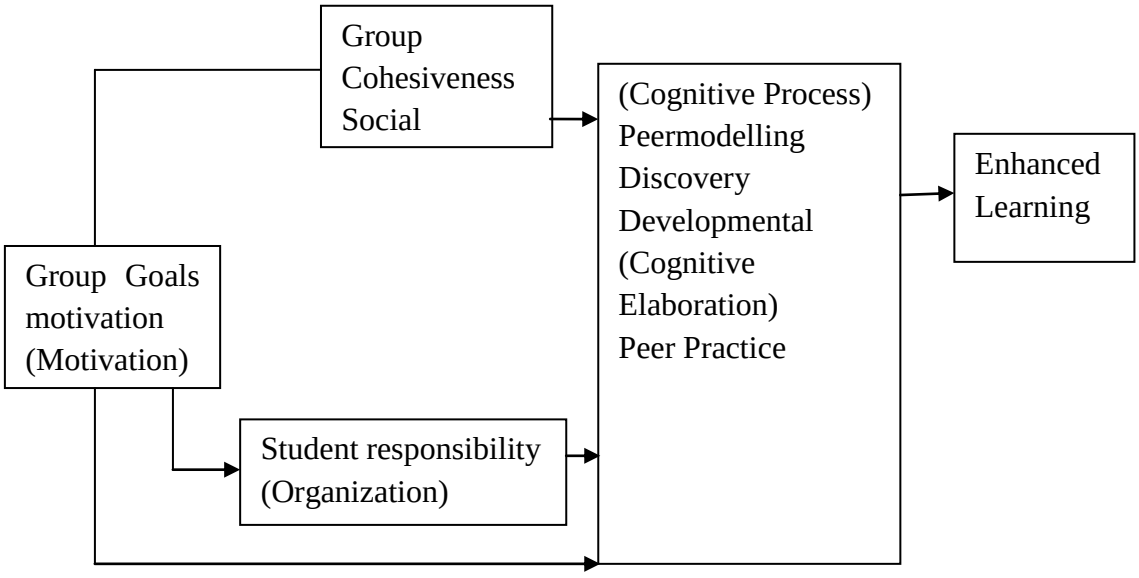

Figure 1: Adapted from Slavin (2006) Research on Co-operative Learning.
Source (John Hopkins University Publishers)

2.7 Conceptual Framework

Figure 2 shows the conceptual framework for determining the effect of using co-operative learning approach on students' academic motivation, classroom environmental perception and achievement in English.

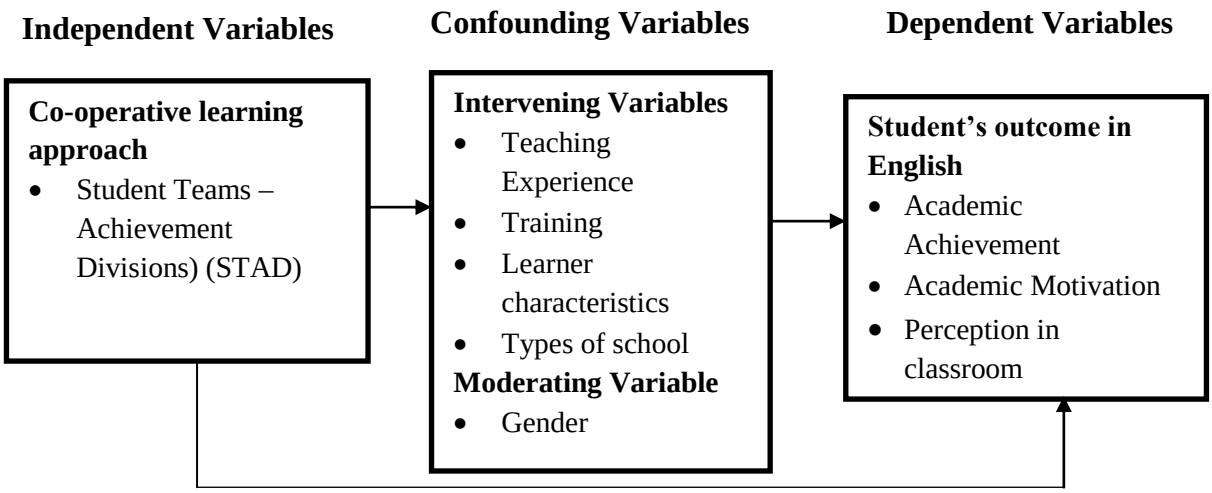

Figure 2: Conceptual Framework of Study Variables

The study had two independent variables and three dependent variables. The independent variables included, cooperative learning approach (CLA) with STAD as its indicator and the conventional teaching approach with lecture method as its indicator. The dependent variables were Academic Achievement in English, Student Motivation and Student Perception of classroom environment. The confounding variables were both intervening and moderating. Intervening variables included, type of school, teacher training and experience, and student characteristics. Moderating variable was gender. In order to control the intervening variables, the researcher used already trained and qualified teachers on the same job group, with similar teaching experience and in Public Co-educational County secondary schools of similar characteristics in terms of learning environment and facilities. In respect to moderating variables, gender, the study statistically modeled and evaluated the moderating effect of gender of the students since the schools were co-educational. In respect to this, the study examined the differences in the scores of the dependent variables between the two genders. In addition, study recommendations were categorically done according to the gender of the students for application and generalization purposes.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter focuses on a number of logically related aspects of the research methodology which was used in the research study. Research design, location and population of the study, the sampling procedure and sample size, instrumentations, data collection procedure, data analysis and ethical consideration are explained.

3.2 Research Design

The study used a Quasi-experimental based on Solomon Four-Group Non-Equivalent Control Group Design (Frankel & Wallen, 2003). The Solomon Four-Group Non-Equivalent Control Group Design is a standard pretest-posttest design and the posttest only control design. The various combinations of tested and untested groups with treatment and control groups allowed the researcher to control confounding variables. The design contained two extra control groups which lessened the influence of confounding variables and allowed the researcher to test whether the pretest had an effect on the subjects. The design was also appropriate because once secondary schools classes are constituted, they exist as intact groups and school authorities do not normally allow such classes to be broken up and re-constituted for research purposes. The selected classes were slotted into experimental and control groups respectively (Mugenda & Mugenda, 2013; Borg & Gall, 2006). The design is illustrated below;

Table 3: A Representation of Solomon Four Non-equivalent Control Group Design.

Group	Pre-Test	Treatment	Post-Test scores
E_1	0_1	X	O_2
C_1	0_3	-	O_4
E_2	-	X	O_5
C_2	-	–	O_6

Source: Adapted from Gall and Borg, 2006.

Key:

E_1- Experimental Group one

E_2- Experimental Group Two

C_1- Control Group one

C_2- Control Group two

O_1O_3- Pre-test Scores

$O_2O_4O_5O_6$- Post - test scores

− - No treatment

X- Treatment.

Table 3 shows four groups of participants, the experimental groups (E_1& E_2) and the control groups (C_1& C_2). Both experimental groups received treatment (X), and the control groups were taught using conventional methods. Group E_1 and C_1 received pretest (O_1& O_3) O_2 O_4 O_5 and O_6 received the post-test. The design helped CLA to achieve the following three purposes;

i. To assess the effect of the experimental treatment relative to the control treatment.
ii. To assess the effect of the pretest relative to no pre-test.
iii. It also provided adequate control on confounding variables that would affect the internal and external validity of the study (Gall & Borg, 2006)

The design is also considered vigorous enough for experimental and quasi-experimental studies (Gall & Borg, 2006). However, in order to control for interaction between selection and maturation, the schools were randomly assigned to the control and treatment groups (Gall& Borg, 2006).

3.3 Location of the Study

The research study was conducted in Nakuru County (see Appendix XV). The County has nine Teachers Service Commission (TSC) administrative units namely; Naivasha, Rongai, Nakuru North, Gilgil, Molo, Nakuru Central, Subukia, Njoro and Kuresoi. It is the fourth largest county in Kenya after Nairobi, Kakamega and Kiambu in terms of population. It has an area of 2,325.8 square kilometers. It is part of the Rift Vally Region which prior to 2013 was referred to as the Rift Valley Province. The selection of Nakuru County for this study was informed by an average mean of 3.10 in English out of a possible 12 points which translated to 25.83% between 2015 and 2018. This performance was lower than the overall national mean score of 37.64% which was notably a worrying negative drop of 11.43%. This implies that Nakuru County performed poorly in English Subject compared to the national performance in the subject. The county has a total number of 332 secondary schools of which 17 are extra-county secondary schools, 307 are sub-county secondary schools and 18 are County Public secondary schools (Nakuru County Education Office, 2019). According to Nakuru County Education Office, (2019) there are only five Public Co-educational County secondary schools.

3.4 Population of the Study

The target population was students and teachers from all Public Co-Educational County Secondary schools in Nakuru County. There are five public Co-Educational County Secondary schools in Nakuru County. The accessible population was 766 form three students from the five public co-educational county secondary schools. Form three students were appropriate because they had been exposed to the English content in detail as per the curriculum syllabus (KICD, 2014) than the Form Ones and Twos. Form fours were a candidate class and as such carrying a research study on the cohort was not recommended by the school administrators. In addition to that, the study targeted five

teachers of English, one from each of the five County Public Co-Educational Secondary Schools. Table 4 indicates the distribution of the targeted students and the accessible population.

Table 4: Distribution of Students in the Targeted Schools

School	Number of Students in the entire school	Form Three Students
School A	1237	201
School B	843	104
School C	1076	175
School D	975	132
School E	616	154
Total	**4747**	**766**

3.5 Sampling Procedure and Sample Size

Sampling is the process of choosing a sufficient number of elements from a population (Borg & Gall, 2006).

3.5.1 Sampling Procedure

Sampling procedure is the process of selecting a sample size. Since the study used Solomon Four Non-equivalent control Group Design, four public co-educational county secondary schools were randomly selected from the five public co-educational county secondary schools in Nakuru County. The four public co-educational county secondary schools were selected using purposive sampling. Two schools were randomly selected to be experimental groups while the other two as control groups. The remaining one public co-educational county secondary schools was used for pilot study.

From each of the schools, the researcher then selected the form three class with the highest number of learners to participate in the study using purposive sampling. This was in order to gain higher sample size and hence generalizability of the findings. Therefore the class sizes differed among the four sampled classes. In addition to that, from each of

the selected public co-educational county schools, the study randomly selected one senior teacher of English using random sampling. The four teachers of English were the key informants of the study for the data triangulation purposes.

3.5.2 Sample Size

The study sample size was 242 Form three students from the four form three classes from the four public co-educational county secondary schools in Nakuru County. This presented 40% of the population of Form Three students and thus meeting the threshold of 20% sample for a population less than 1000 as recommended by Mugenda and Mugenda (2003). The key informants of the study were four teachers of English from the sampled schools. Therefore the total sample size was 246 respondents. Table 5 shows the distribution of the sample size.

Table 5: Actual Class Size

Group	School	Form Three students	Sampled students	Sampled Teachers
Experimental 1	School A	201	80	1
Experimental 2	School B	104	41	1
Control 1	School C	175	69	1
Control 2	School D	132	52	1
Total		**612**	**242**	**4**

3.6 Instrumentation

The study used six instruments to collect data. Three instruments were used to collect quantitative data namely; English Achievement Test (EAT) (Appendix VIII); Students' Motivation Questionnaire (SMQ) (Appendix IX), Students' Perception Guide (SPG) (Appendix VI) for the classroom environment while three other instruments were used to collect qualitative data which would not be captured by the quantitative measures. These

included; Teachers Class Observation Guide andTeachers Perception Guide (TPG) (Appendix IV and Appendix V) and Students Interview Guide (SIG) (Appendix VII).

a) English Achievement Test (EAT)

An English Achievement Test (EAT) (Appendix VIII) was developed by the researcher and modified to make it serve the purpose of this study. The test items were constructed based on the topics of grammar, oral poetry, poetry appreciation and cloze test. Two experienced experts from the department of education, Kabarak University and two language K.C.S.E examiner teachers assessed the content and their inputs were factored. In order to ascertain for validity, the instrument was pilot tested and adjusted before using it for actual data collection. The instrument was used to collect quantitative data.

b) Student Motivation Questionnaire (SMQ)

The SMQ (Appendix IX) instrument was used in assessing the students' motivation and feelings towards the English content and was used to collect quantitative data. The SMQ was based on Keller's ARCs motivation theory (Hohn, 1995; Kiboss, 1997; and Wachanga & Mwangi, 2004)). It was based on a five-point Likert scale having choices, Strongly Agree=SA, Agree=A, Undecided=U, Disagree=DA and Strongly Disagree =SD. The SMQ contained 40 Likert type scale items on favorable and unfavorable statements of students' motivation towards cooperative learning approach versus conventional teaching methods.

c) Students Perception Guide (SPG) of Classroom Environment

The SPG (Appendix VI) instrument was used in assessing the student's perception of classroom environment towards CLA. The SPG was based on Gregory's constructivist theory of perception (Almulla, 2017). It was based on a five pointer Likert scale having choices, Strongly Agree=5, Agree=4, Not Sure=3, Disagree =2 and Strongly Disagree=1.

The SPG contained 47 Likert type scale items on general classroom environment perception of CLA, Academic outcomes, Social outcomes, Perceptions regarding teachers implementation of CLA, Students behavior in group work and Students challenges and difficulties in CLA.

d) Students Interview Guide (SIG)

Student Interview Guide (Appendix VI) was used to collect qualitative data which supplemented the quantitative data from the students. Qualitative data are forms of information gathered in a non-numeric form example, interview transcript and field notes. Student Interview Guide contained fourteen structured questions which were used to collect students' opinions about the cooperative learning approach.

e) Teacher Perception Guide (TPG)

Teacher perception guide (Appendix IV and Appendix V) was used to get teacher information about usage of cooperative learning approach as a new learning method. It contained twenty structured questions and was used to collect qualitative data.

3.6.1 Pilot of the Study

The pilot study was done in one of the public co-educational county secondary school that was not used in the study. The county co-educational public secondary secondary school fell within one of the nine TSC administrative units of Nakuru County. In the pilot study, a one week induction course was offered to the English teachers who were used in administering the treatment to the students in the experimental groups. The induction course aimed at training the teachers of English on the various aspects of CLA as well as how to manage the class under CLA. The school had four classes of Form Three students in which two were randomly selected to be experimental groups (E1 & E2) and two control groups. The researcher then delivered the instrument to the teachers

a day before the study commenced. The experiment was done according to the Solomon Four-Group Non-Equivalent Control Group Design. The pilot study lasted four weeks. The students' scores from the tests were recorded and used for data analysis. The researcher also gave an interview schedule to students and teachers in order to obtain their views and classroom environmental perceptions about CLA during the pilot study. The purpose of piloting the instruments was to check and ascertain the reliability of the items in the questionnaires.

3.6.2 Validity of the Instruments

Validity refers to the extent in which an instrument accurately obtains the data it intends to collect (Mugenda & Mugenda, 2013). Content validity was attained by setting questions from areas that were taught during the research period. The instruments construct validity was attained by having a table of specification. Testing of validity was done by availing the instrument to two experienced experts in research and two others in measurement and evaluation from the department of education, Kabarak University and two language K.C.S.E examiner teachers to assess its content validity. Their inputs were factored before the final instrument was produced.

3.6.3 Reliability of the Instruments

The reliability of a measure concerns its ability to produce similar results when repeated measurements are made under identical conditions. The data collected during piloting in this study was used to estimate the reliability of the instruments. The purpose of reliability was to check and ascertain that the results obtained when using a measuring tool in research was consistent and could be replicated in another station (Wallen & Frankel, 2000). Cronbach's alpha coefficient was used to determine the reliability of the instruments. According to Cronbach a reliability measure of above 0.70 was considered

appropriate and showed that the instrument was adequately reliable and hence suitable for this study. The Cronbach coefficient formula is shown below;

Where $\propto\propto$ = reliability coefficient of the test

k = number of items in the test

si^2si^2 = variance of scores of the individual items

s^2s^2 = variance of the total scores of the test.

A reliability coefficient of 0.812 for EAT, 0.801 for SPG and 0.789 for SMQ were obtained, hence the instruments were acceptable.

3.7 Data Collection Procedures

The researcher got an introductory letter from the Director of Post Graduate Studies, Kabarak University and a research permit from the National Commission of Science, Technology and Innovation (NACOSTI) to collect data for the study in Nakuru County. The researcher also sought authority from the County Director of Education and the County Commissioner to collect data for the study in Nakuru County. The researcher visited the selected schools to brief the Principal and form three teachers of English on the essential attributes and motivation for the research, one week before its commencement. A one day induction course was offered to the teachers of English who were used in administering the treatment to the students in the experimental groups (E1 & E2). The researcher then delivered the instruments to the teachers of English prior to the commencement of the study. The researcher sought the participants consent on the first day of classes. An informed consent form was presented (see appendix III) to the participants to sign. A teachers' classroom observation guide showing how CLA classroom environment work was organized and covered was issued to the teachers of English (Appendix IV).

A pre- test of EAT, SPG and SMQ was administered to the students in the experimental group 1 (E1) and control group 1 (C1) to measure their initial English language knowledge, classroom environmental perception and motivation before CLA was applied to the experiment group. Experimental groups' classes were taught using CLA by the inducted teachers while the control groups were taught using the conventional approach. Therefore the teaching of English using both the CLA for the experiment group and the conventional approach by the control group was done by the teachers who had been inducted on how to conduct the teaching under this study. The teaching of the two groups (control and experimental groups) lasted four weeks. The post – tests (EAT, SPG and SMQ) were administered to all the four groups (E1, E2, C1 and C2) at the end of the treatment period. The students' scores from the tests were recorded and used for data analysis. The researcher also gave an interview schedule to students in order to obtain their views and classroom environmental perceptions about CLA. Finally the researcher scored and coded the data for analysis.

3.8 Data Analysis

Data was analyzed using both descriptive and inferential statistics using the statistical package for social science (SPSS version 24). For descriptive statistics, means and standard deviations were used to show the average scores of students on different research instruments and questions as well as their distribution. For inferential statistics, t- test, ANOVA, and ANCOVA were used to determine the effect of both CLA and conventional approach on student's academic achievement in English. They were also used to examine the effect of CLA on student's motivation to learn English between those taught using CLA and those taught using conventional approach. Moreover they were used to establish the effect of CLA on students perception of the classroom

environment towards learning English between those taught using CLA and those taught using conventional approach.

The hypotheses were tested using the following statistical tests for significance: to determine if there was any statistically significant effect on students' academic motivation in English between experimental and control groups. They were also used to examine the effect of CLA on student's classroom environment perception to learn English between those exposed to the experimental and control groups. They were also used to establish the effect of CLA on student's academic achievement in English items in the new classroom environment. ANCOVA was used for statistical adjustment to enhance control if variation was evident in the experimental and control groups at the time of pre- testing. The study further used moderated regression model to establish the moderating effect of gender on the relationship between cooperative learning approach and Academic Motivation in English, Classroom Environmental Perception in English and Academic Achievement in English. Qualitative data was coded into themes, interpreted and organized and a computer assisted qualitative data analysis (CAQDAS) package was used. The level of significance was computed at 5% significant level in order to guide in the rejection or acceptance of the null hypothesis. Summary of data analysis is given in Table 6.

Table 6: Summary of Data Analysis

Hypothesis	Independent variables	Dependent variables	Statistical Method for Data Analysis
H01: There is no statistically significant effect of cooperative approach and conventional learning approach on academic motivation in English in Public Co-Educational County Secondary schools, Nakuru County, Kenya.	Cooperative and Convention learning approach	Academic Motivation in English	t- test ANOVA ANCOVA
H02: There is no statistically significant effect of cooperative approach and conventional learning approach on classroom environmental perception in Public Co-Educational County Secondary schools, Nakuru County, Kenya.	Cooperative and Convention learning approach	Classroom Environmental Perception in English	t- test ANOVA ANCOVA
H03: There is no statistically significant effect of cooperative approach and conventional learning approach on academic achievement in English in Public Co-Educational County Secondary schools, Nakuru County, Kenya.	Cooperative and Convention learning approach	Academic Achievement in English	t- test ANOVA ANCOVA
H04: There is no statistically significant effect of gender on the relationship between learning approaches and academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya.	Cooperative Learning approach and Gender of Students	Academic Motivation in English, Classroom Environmental Perception in English and Academic Achievement in English	Regression Analysis

3.9 Ethical Considerations

Bryman (2016) contends that ethical matters are extremely important and ought to be given a thought before commencing a research study. Ethical guidelines "were meant to assist and have participants' secure, build trust with participants and ensure trustworthy

results from the research (Busher & James, 2012). The researcher therefore drafted an informed consent letter which the participants read and signed before the study began.

In addition that, Thomas (2009) averred to the fact that moral issues requiring subject consent are of essence in research. The scholar further argues thatthere should be an informed consent, which means that the participants should comprehend well on to what they are agreeing. Accordingly, in order to ensure compliance with this ethical requirement, the researcher included the following declaratory and explanatory points in the design and content of the letter of consent: the essence, motive, methodology, gains or dangers, privacy, obscurity, as well as when and how data of the study would be stored and destroyed, as evidenced in the consent letters shown in Appendices (1, & II) of this thesis. The said letters were issued to participants. In the letter, the motive of carrying out the study was communicated to participants. The participants were made aware that any participant was at liberty to decline to take part or pull out from the study at any stage. All individual information was treated with caution as being obscure private and was kept in the laptop and password protected. Anonymity was assured by allocating a number to each participant during the analysis process. The study will provide the findings of the study to the sampled schools in order to understand how cooperative learning approach affects academic motivation, classroom environmental perception and English achievement.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

The study sought to investigate the effect of using Cooperative Learning Approach on public co-educational secondary school students' academic motivation, classroom environmental perception and achievement in English in Nakuru County, Kenya. This chapter presents the data analysis, findings and discussion of the findings.

4.2 Response Rate

The study sample was 242 students picked from public co-educational secondary schools in Nakuru County, Kenya. This comprised of 80 students from Secondary School A (Experimental 1), 41 students from Secondary School B (Experimental 2), 69 students from Secondary School C (Control group 1) and 52 students from Secondary School D (Control group 2). Two types of questionnaires, namely, Students' Motivation Questionnaire (SMQ), and Student's Perception Guide (SPG) of classroom environment were administered to the students. The students were also given English Achievement Test (EAT). Table 7 shows the response rate for the study.

Table 7: Response Rate

Respondents	Sample	Response	Response Rate
Experimental 1	80	71	88.8%
Experimental 2	41	37	90.2%
Control 1	69	58	84.1%
Control 2	52	44	84.6%
Total	**242**	**210**	**86.8%**

The response rate indicated that out of the 80 students sampled in Experimental group 1, 71 of them successfully participated in the study while in Experimental group 2, 37 students took part in the study against a sample of 41 students. This presented a response

rate of 88.8% and 90.2% for the Experimental group 1 and Experimental group 2 respectively. A sample size of 69 students was targeted in control group 1 but only 58 students took part in all stages of the study while in control group 2, only 44 students participated in all stages of the study against a sample size of 52. This presented a response rate of 84.1% and 84.6% for Control group 1 and Control group 2 respectively. The total response rate for the study was 86.8%.

According to Hall (2015), a response rate of at least 80% is sufficient to make generalization of study findings to the target population. This therefore implied that the achieved response rate was enough to make generalization on the usage of Cooperative Learning Approach on public co-educational secondary schools students' academic motivation, classroom environmental perception and achievement in English in Nakuru County, Kenya. This high response rate was achieved due to the allocation of adequate time for filling in the questionnaires by the students and urging them to fully cooperate during the entire period of the study.

4.3 The Effect of Cooperative and Conventional Learning Approaches on Students' Academic Motivation in English

The first objective of the study was to determine the effect of cooperative and conventional learning approaches on academic motivation in English in county co-educational secondary schools, Nakuru County, Kenya. Students' academic motivation in English was measured by the use of Students' Motivation Questionnaire (SMQ). The instrument contained 40 likert type scale items on favorable and unfavorable statements of students' motivation towards cooperative learning approach versus conventional teaching methods. The SMQ instrument was based on a five-point likert scale having choices, Strongly Agree=SA, Agree=A, Undecided=U, Disagree=DA and Strongly

Disagree =SD. As already explained, the five point likert scale was adopted in preference over the three point likert scale in order to offer a wider choice of options for the participants to respond to questions and as such it's high number of choices reduced errors. This also enabled rigour when analyzing data and producing results. Moreover, the five point likert scale was sufficient in meeting the criteria of test-retest reliability, concurrent validity and predictive validity. The instrument was administered six times; two times as a pre-test for two groups and four times as post-test for the four groups. The research study instrument, Pretest was carried out to show the entry condition of the students in regard to their academic motivation in English for both the experimental and control groups while the post-tests were used to show the effect of cooperative learning approach on the students' academic motivation in English in public co-educational secondary schools in Nakuru County, Kenya. Table 8 shows the pre-test mean scores for academic motivation for experiment group 1 and control group 1.

Table 8: Comparison of Pre-test Means of Groups on Academic Motivation

Test	Group	N	Mean	SD
Academic Motivation	E1	71	2.6183	0.30110
	C1	58	2.5328	0.34711

Table 8 shows that the mean scores for academic motivation for E1 was 2.6183 and that for C1 was 2.5328. This implied that the entry level of academic motivation of the two groups was different. The mean score obtained was around the middle point of five point Likert scale and therefore implying that the respondents had an average motivation towards learning of English. Ngendahayo and Askell-williams (2016) assert that mean scores in the range of 2.5 – 3.5 implies average scores on measured phenomenon on a five- point Likert scale of 1 to 5. The achieved standard deviation was below 1.0 implying that there was convergence among the respondents in rating various statements

of Students' Motivation Questionnaire (SMQ) (Latunde, 2016). Further, the study not only sought to establish if there were differences in the academic motivation but also established whether the differences in the academic motivation level towards learning English was statistically significant. This was achieved through the use of Independent Samples, t-test. This was done by transforming the Likert data (categorical) into scale data by calculating the composite score. The findings are presented in table 9 below.

Table 9: Independent Samples t-test of the Pre-test Scores on Academic Motivation

	Group	**N**	**Mean**	**SD**	**t-value**	**DF**	**P-value**
Academic	E1	71	2.6183	0.30110	1.4499	127	0.136
Motivation	C1	58	2.5328	0.34711			

From the findings above, it is evident that there was no statistically significant differences at t(127) =1.4499, P>0.05 in the students 'pre-test scores in Academic Motivation between E1 and C1. The null hypothesis of t-test was not rejected and concluded that there are no significant differences in the mean scores of pre-test on academic motivation between E1 and C1. This implied that the groups used in this study exhibited homogeneous characteristics and therefore were suitable for the current study. The Experimental groups' classes were taught using CLA for a period of four weeks while the control groups' classes were taught using the conventional methods during the same period of time. The four weeks was sufficient to cover the EAT content for both the control and experimental groups. The post – test instrument of Students Motivation Questionnaire (SMQ) was administered to all the four groups (E1, E2, C1 and C2) at the end of the treatment period. Table 10 shows the post-test mean scores and standard deviations of the groups' academic motivation.

Table 10: Comparison of Post-test Means and SD of Groups on Academic Motivation

Test	Group	N	Mean	SD
Academic Motivation	E1	71	4.1183	0.30110
	C1	58	2.8069	0.31615
	E2	37	4.0270	0.32459
	C2	44	2.7000	0.31916

Table 10 indicates that E1 had the highest level of academic motivation of 4.1183, followed by E2 with academic motivation of 4.0270, then C1 with academic motivation of 2.8069 and lastly C2 with an academic motivation of 2.7000. All the achieved standard deviations were below 1.0 which implied that there was high consensus among the respondents in rating the statements in the Student Motivation Questionnaire (SMQ) (Gratton, 2015). The comparison of post-test mean scores of the academic motivation was further presented in a line graph to depict the differences between the four groups (E1, E2 C1 and C2). The line graph is as shown in Figure 3.

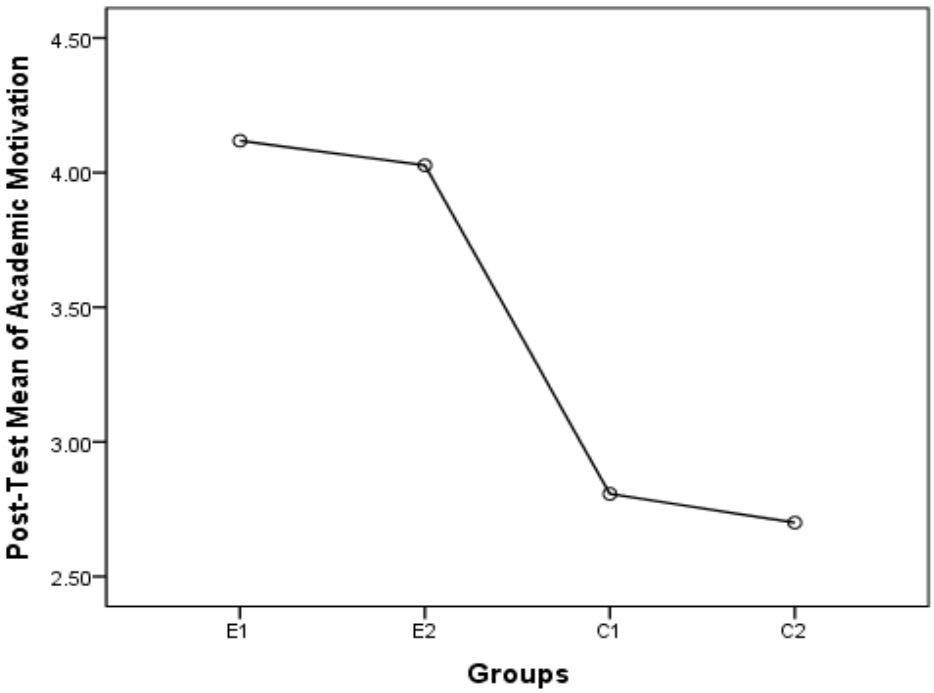

Figure 3: Academic Motivation Post-test Mean Scores obtained by the Students in the Four Groups

Figure 3 shows that there was a significant difference between the experimental groups and the control groups in regard to their academic motivation scores being in favour to the experimental groups. This implies that the cooperative learning approach had an effect on the academic motivation of students towards the learning of English. The observed differences in the mean scores between E1 and E2 and between C1 and C2 may have been due to the second exposure of the same SMQ to groups E1 and C1. The study further sought to examine whether the observed differences in mean scores between experimental groups E1, E2 and control groups C1 and C2 for the post-test on academic motivation were statistically significant. This was ascertained by the use of ANOVA as shown in Table 11.

Table 11: ANOVA of the Post-test Score on the Academic Motivation

	Sum of Squares	**DF**	**Mean Square**	**F**	**P-value**
Between Groups	92.758	3	30.919	315.060	0.000
Within Groups	20.216	206	0.098		
Total	**112.974**	**209**			

Table 11 indicates that the differences in the mean scores for the Post-test on the Academic Motivation were statistically significant at $F(3,206)=315.060$, $P<0.05$. Before rejecting the null hypothesis of the F-test, findings in Table 4.5 do not indicate which of the groups are similar and which are different from the other. To establish this, the study carried out Least Significant Difference (LSD) post hoc test and whose results are shown in Table 12.

Table 12: Least Significant Difference (LSD) Post Hoc Comparisons of the Academic Motivation Post-test Means for the Four Groups

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	P-Value
	C1	1.31141*	0.05545	0.000
E1	E2	0.09128	0.06352	0.152 (NS)
	C2	1.41831*	0.06011	0.000
	E1	-1.31141*	0.05545	0.000
C1	E2	-1.22013*	0.06591	0.000
	C2	0.10690	0.06263	0.089 (NS)
	E1	-0.09128	0.06352	0.152 (NS)
E2	C1	1.22013*	0.06591	0.000
	C2	1.32703*	0.06988	0.000
	E1	-1.41831*	0.06011	0.000
C2	C1	-0.10690	0.06263	0.089 (NS)
	E2	-1.32703*	0.06988	0.000

*The mean difference is significant at the 0.05 level.

(NS) –Not Significant

As shown in Table 12, Least Significant Difference (LSD) Post Hoc shows the differences in any two groups. It was revealed that there were significant differences in students' academic motivation between groups E1 and C1, E1 and C2, C1 and E1, C1 and E2, E2 and C1, E2 and C2, C2 and E1, and between groups C2 and E2. This was because of their p values being less than 0.05. However, there were no significant differences between groups E1 and E2, C1 and C2, E2 and E1, and between groups C2 and C1. This was due to their p values being greater than 0.05. This therefore implied that the prior exposure to the Student Motivation Questionnaire (SMQ) had no significant effect on their (student) motivation.

In overall, the experimental groups outperformed the controls groups in academic motivation in English. This implied that the usage of cooperative learning approach in the teaching of English improved students' academic motivation towards learning of the

subject. These findings concur with those by Amaka (2016) found out that cooperative learning approach resulted to higher motivation scores towards the subject among the students. It was further revealed that cooperative learning approach promoted and encouraged active engagement in learning, discovery learning, social interaction, learning by experience, learning by doing and self-motivation.

Table 13 shows the comparison of the students' academic motivation post-test mean scores between the experimental E1, E2 and control groups C1, C2 combined.

Table 13: Comparison of the Students' Academic Motivation Post-test Mean Scores between the Experimental and Control Groups

Test	Group	N	Mean	SD	Std. Error Mean
Academic Motivation	Experiment (E_1,E_2)	108	4.0870	0.31089	0.02992
	Control (C_1,C_2)	102	2.7608	0.32032	0.03172

Table 13 shows that the experiment groups had a mean score of 4.0870 out of a maximum of 5.0 while the control groups had a mean score of 2.7608 out of a maximum score of 5.0. The difference between the two groups was 1.3262. This further implied that the experiment groups outperformed the control groups in students' academic motivation. The study sought to establish whether the observed differences between the experiment and control groups were statistically significant by using Independent Samples t-test. The results are shown in Table 14.

Table 14: Independent Samples t-test of Students' Academic Motivation Post-test Mean Scores between the Experimental and Control Groups

Test	Group	N	Mean	SD	t-value	DF	P-value
Academic Motivation	Experiment	108	4.0870	0.31089	30.445	208	0.000
	Control	102	2.7608	0.32032			

The null hypothesis of t-test was rejected due to $t(208)=30.445$, $p<0.05$ and therefore concluding that there are statistically significant differences in the students' academic motivation post-test mean scores between the experimental and control groups. These findings are in line to the findings of Sanaie et al., (2019) who revealed that there were significant differences in the academic motivation between the experimental and control group. In respect to this, the study found out that nursing students taught using Jigsaw method had a higher academic motivation score compared to the nursing students taught using lecture method.

In order to establish the effect of cooperative learning approach, the differences in the pre-test scores and the post test scores on Students' Academic Motivation for E1 and C1 Groups were computed and results presented in Table 15.

Table 15: Gain analysis on Students' Academic Motivation Post-test Mean Scores for E_1 and C_1 Groups

Stage	Scale	E1	C1
Pre-Test	N	71	58
	Mean	2.6183	2.5328
Post-Test	N	71	58
	Mean	4.1183	2.8069
Mean Gain		**1.500**	**0.2741**

According to Table 15, the difference between the pre-test mean score for E1 and its post-test mean score was 1.500. This implied that the cooperative learning approach resulted to a gain of 1.5 in a five point Likert scale. This is equivalent to 37.5% improvement in academic motivation in English when CLA is used in teaching the subject. On the other hand, the difference between the pre-test and post test results for the C1 was found to be 0.2741. This implied a 6.9% improvement in academic motivation in English when conventional methods are used. This improvement may have

been as a result of the second exposure of the instrument (Students' Motivation Questionnaire) to the same group of Students. In line to this, Shakerian and Abadi (2018) found that CLA had a statistically significant effect on the motivation of the students.

However, since the study used non-equivalent groups, this might present a threat to the internal validity of non-equivalent control and experiment groups. This implies that the observed group differences on the post-test may be due to initial or pre-existing group differences rather than to the effect of the treatment (Glăveanu, 2012). This study involved non-equivalent control and experiment groups and therefore Analysis of Covariance (ANCOVA) using pre-test scores as the covariates was used as a confirmatory test and as a method to remove any biasness in group inclusion in the study. The reason for the use of the pre-test scores as covariates was because the duration between the pre-test scores and the post-test results was short and therefore reflecting the current position of the students in respect to the measured variables. KCPE results could be used as possible covariates but due to long time duration between the class eight and form three, KCPE results proved invalid and could not ascertain the current position of learners in respect to the measured variables. In addition, academic motivation and classroom environmental perception of students are not tested at KCPE level. The purpose of ANCOVA is to reduce the effects of initial group differences statistically by making compensating adjustment to post-test mean scores of the groups involved. Table 16 shows the adjusted students' academic motivation post-test mean scores with pre-test scores as covariates.

Table 16: Adjusted Students' Academic Motivation Post-test Mean Scores with Pre-test scores as Covariates

Test	Group	N	Observed Mean	Adjusted Mean
Academic Motivation	E1	71	4.1183	4.099
	C1	58	2.8069	2.831

Using pre-test scores as covariates, the academic motivation in English mean scores for E1were adjusted from 4.1183 to 4.099, while the academic motivation in English scores for C2 were adjusted from 2.8069 to 2.831. The study sought to establish whether the differences in the adjusted mean scores between E1 and C1 were statistically significant. The results of these endeavors are presented in Table 17.

Table 17: ANCOVA Test Results Comparing Students' Academic Motivation Post-test Mean Scores

	Sum of Squares	DF	Mean Square	F	P-Value
Pre-Test Scores	3.431	1	3.431	50.192	0.000
Academic Motivation	50.420	1	50.420	737.625	0.000
Error	8.613	126	0.068		
Total	**1673.200**	**129**			

According to Table 17, there are significant differences in the adjusted mean scores for the Students' Academic Motivation Post-test Mean Scores between the E1 and C1 using pre-test results as covariates. This is due to a $F(1,126)=737.625$, $P<0.05$. The first hypothesis of the study stated that: There is no statistically significant effect of cooperative learning approach and conventional learning approach on academic motivation in English in Public Co-Educational County Secondary schools, Nakuru County, Kenya. This hypothesis was rejected at 5% significance level and the study concluded that there is statistically significant effect of cooperative learning approach on students' academic motivation in English in public co-education secondary schools in Nakuru County, Kenya.

The findings are in agreement to those by Rowntree (2018) who found out that there were significant differences in the academic motivation of learners towards the learning of STEM subjects in Abu Dhabi. In respect to this, it was noted that students taught

using cooperative learning approach had a higher academic motivation towards STEM subjects compared to those were taught using conventional methods such as lecture method. Similarly, Rachmah (2017) using t-test the study revealed that there was significant differences in the academic motivation of students between those who were taught using Jigsaw method and those taught using cooperative learning approach. The level of academic motivation of psychology students taught using Jigsaw method was higher than the motivation scores of the psychology students taught using lecture method.

The level in which the cooperative learning approach affected students' academic motivation in English in public co-education secondary schools in Nakuru County, Kenya was presented in the gain analysis in Table 18.

Table 18: Gain Analysis on Adjusted Students' Academic Motivation Post-test Mean Scores for E_1 and C_1 Groups

Stage	Scale	E1	C1
Pre-Test	N	71	58
	Mean	2.6183	2.5328
Post-Test	N	71	58
	Mean	4.099	2.831
Mean Gain		**1.4807**	**0.2982**

A gain score of 1.4807 was achieved in respect to the academic motivation of students in English for the Experiment Group 1 and a gain score of 0.2982 was achieved in respect to the academic motivation of students in English for the Control Group 1. It implied that by teaching English subject using CLA in public co-educational secondary schools in Nakuru County, the students are likely to improve their academic motivation with a margin of 37.0%. Teaching of the subject using the conventional methods would only

realize a gain of 7.5%.These results further showed that cooperative learning approach improved students' academic motivation in English in public co-education secondary schools in Nakuru County more than the use of conventional teaching methods. In respect to this, students taught using cooperative learning approach are approximately 30% more motivated in learning English as compared to those using conventional teaching methods. This is in line with the students' and teachers' narrations from the interviews, as presented below.

In response to the question, "is cooperative learning of any help to you academically?" One of the students' response was that:

Student's Excerpt 1:

> *"Through cooperative learning approach I was able to build positive relationships with fellow students and found that important in motivating me towards liking the English subject. This was especially through group discussions. I aspired to study English after K.C.S.E".*

Teacher's Excerpt 1:

> *"When I use cooperative learning approach in teaching English Subject, students get motivated to help one another learn. In this way, the students are able to understand what teacher is teaching in class. Through this, the students get motivated academically and help one another strengthen their own learning"*

The findings in this study are in line with those by Melnichuk and Osipova (2017) who indicated that the various viewpoints provided to students in cooperative learning approach such as an opportunity to converse with peers, present and defend their ideas as well as asking questions benefit learners in diverse ways such as academic motivation. Williams (2018)also noted that through cooperative learning, learners were able to

motivate one another towards learning the subject through arguing, presenting ideas to fellow students and challenging one another. Although Williams (2018) study focused on college level students while the current study focused on public coeducational secondary school level students, there is an evident convergence of findings with respect to the effect of cooperative learning approach on student academic motivation.

Moreover, the study also concurred with the findings by Pandya (2017) who noted that the use of cooperative learning was a predictor of academic motivation of students in diverse ways. Alraddadi (2018) revealed that through the use of cooperative learning approach, students were able to have positive perceptions towards the learning of Biology as compared to those taught using conventional learning approaches. The study further noted that there were significant differences in the perceptions of students in regard to practical work ($p< 0.01$), self- concept in biology ($p<0.01$) and their attitude towards importance of biology subject ($p< 0.05$). The study concluded that cooperative learning approach improved the social skills of students and also enhanced their attitudes and motivation towards the learning of Biology.

Marashi and Khatami (2017) on the other hand found that cooperative learning approach had a positive effect of both motivation and creativity in English Language Teaching (ELT).However, these findings differ with those by Hortigüela-Alcalá et al. (2020) who revealed that majority of the teachers perceived cooperative learning approach as inapplicable in the context of physical education. Cooperative learning approach was rated the least of all other pedagogical models and did not have transversally on a social level.

The above findings and assertion are reinforced by a number of other studies , including: Saltymakov and Frantcuzskaia (2015); Çolak, (2015); Nwabueze (2018); as well as

Molla and Muche, (2018). Saltymakov and Frantcuzskaia (2015)who sought to establish the benefits of cooperative learning. They established that positive interdependence and face-to-face interaction provided for in cooperative learning approach motivated the students to perform better than their peers who were taught using conventional practices. Further, they noted that through the use of interpersonal and small group skills, learners were highly motivated to work hard in class and therefore produced higher academic achievement in the long run.

Çolak (2015) established that there was a statistically significant relationship between cooperative approach of learning and student academic motivation. He noted that students using cooperative approach of learning were highly motivated as compared to those using conventional methods of learning. In a study to determine the advantages of cooperative learning approach, Nwabueze (2018) established that students taught using cooperative learning approach had intrinsic motivation towards learning. Further, the study established that students not only had greater persistence throughout the education process, but also had lower levels of anxiety and stress as well as more positive and supportive relationships with peers which resulted to higher academic motivation. Nwabueze (2018) investigated the effect of cooperative learning approach at University level involving undergraduate students in education, sciences, humanities, social sciences and engineering.

Molla and Muche, (2018) established that through cooperative learning in Biology, students were inspired to continue with the subject in advanced studies and later on pursue a career in the subject. The study also noted that other students were motivated through cooperative learning to apply concepts that were learnt in class in real life

situations while others continued to study the subject even during holidays without any supervision.

In line with the current study, Adams (2015) revealed that positive interdependence and individual accountability aspects of the cooperative learning approach improved the motivation of students towards learning classroom subjects. However, the study by Adams (2015) was done in South Africa while the current study was done in Kenya. In agreement to the current study, Gokhale (2015) noted that cooperative learning approach led to active exchange of ideas within small groups and this not only increased interest among the participants but also promoted critical thinking. The study further noted that cooperative teams achieve at higher levels of thought and retain information longer than students who work quietly as individuals. While the study by Gokhale (2015) focused on how cooperative learning improved the critical thinking of students, the current study evaluated cooperative learning against motivation towards learning.

A study by Njenga (2018) similarly found out that there were significant differences in the level of academic motivation of students towards learning of mathematics. Njenga (2018) concluded that cooperative learning was effective in improving the academic motivation of students. In agreement to the current findings, Nyabiosi, Wachanga, and Buliba (2017) concluded that cooperative learning approach was effective in improving both the academic motivation and the academic achievement of students. The researchers focused on performance of Kiswahili Language Comprehension in secondary schools in Kisii County.

Njoroge and Githua (2017) on the same context found out that the use of cooperative learning approach among the students resulted to an increase in the level of academic motivation. In respect to this, there were significant differences in the level of academic

motivation towards performing Mathematics tasks in class between the students using cooperative learning approach and those using conventional methods of learning. Similarly, Muraya and Kimamo (2017) revealed that the students taught using cooperative learning approach were more motivated towards learning Biology subject as compared to those taught using the regular methods. The study concluded that cooperative learning was effective in improving the academic motivation of learners in Biology as a Subject.

4.4 The Effect of Cooperative and Conventional Learning Approaches on Students' Perception of Classroom Environment

The second objective of the study sought to examine the effect of cooperative learning and conventional learning approaches on classroom environmental perception in county co-educational secondary schools, Nakuru County, Kenya. Data on students' perceptions of classroom environment was gathered by use of Student Perception Guide (SPG) on classroom environment. The SPG contained 47 Likert type scale items on General perception of CLA classroom environment, Academic outcomes, Social outcomes, Perceptions regarding teachers implementation of CLA, Students behavior in group work and Students challenges and difficulties when using CLA. This instrument was first used to establish the initial perceptions of the students before treatment was administered to the experimental groups. The pre-test was administered to Group E1 and C1. The results for the pre-test are shown in Table 19.

Table 19: Comparison of Pre-test Means of Groups on Students' Perception of Classroom Environment

Test	Group	N	Mean	SD
Perception of Classroom Environment	E1	71	2.3042	0.26909
	C1	58	2.3397	0.30142

Table 19 indicates that the mean score for the students' Perception of Classroom Environment for the E1 was 2.3042 while that of the C1 was 2.3397. This implied that the C1 group had a more favourable perception of classroom environment than the E1 group. It was further established that there was a high consensus in rating the various metrics of student perception of the new classroom environment. The study further sought to establish whether the identified differences in the mean scores for the pre-test were statistically significant using a t-test. The results for the t-test are as shown in Table 20.

Table 20: Independent Samples t-test of the Pre-test Scores on Students' Perception of Classroom Environment

Test	Group	N	Mean	SD	t-value	DF	P-value
Perception of Classroom Environment	E1	71	2.3042	0.26909	-0.705	127	0.482
	C1	58	2.3397	0.30142			

The result in Table 20 indicates that there were no statistically significant differences in the two pre-test scores for the E1 and C1 groups. This is because of $t(127)=-0.705$, $p>0.05$. This therefore implied that the differences observed were just by chance and hence an indication that the groups used in this study exhibited homogeneous characteristics and therefore fit for inclusion in the study. The experimental groups, E1 and E2 were taught using cooperative learning approach for a period of four weeks and then a similar instrument of Student Perception Guide (SPG) on class environment was administered to all groups at the end of the four weeks. The Post-test Mean scores of Groups on Students' Perception of Classroom Environment are shown in Table 21.

Table 21: Comparison of Post-test Means of Groups on Students' Perception of Classroom Environment

Test	Group	N	Mean	SD
Perceptions of classroom environment	E1	71	3.7423	0.29163
	C1	58	2.7397	0.30142
	E2	37	3.6351	0.32250
	C2	44	2.6455	0.32382

The study revealed that E1 had a favourable post-test perception of the classroom environment at 3.7423, followed by E2 with a classroom environment perception level of 3.6351, then C1 with perception of classroom environment at 2.7397 and lastly C2 with a classroom environment perception rated at 2.6455. The achieved standard deviations were below 1.0, therefore implying that there was a high consensus among the respondents in rating the statements in the SPG with regard to classroom environment. The comparison of post-test means on Perception of Classroom Environment was further presented in a line graph to depict the differences between the four groups in a clearer manner. The line graph shows the differences of classroom environment perceptions as shown in Figure 4.

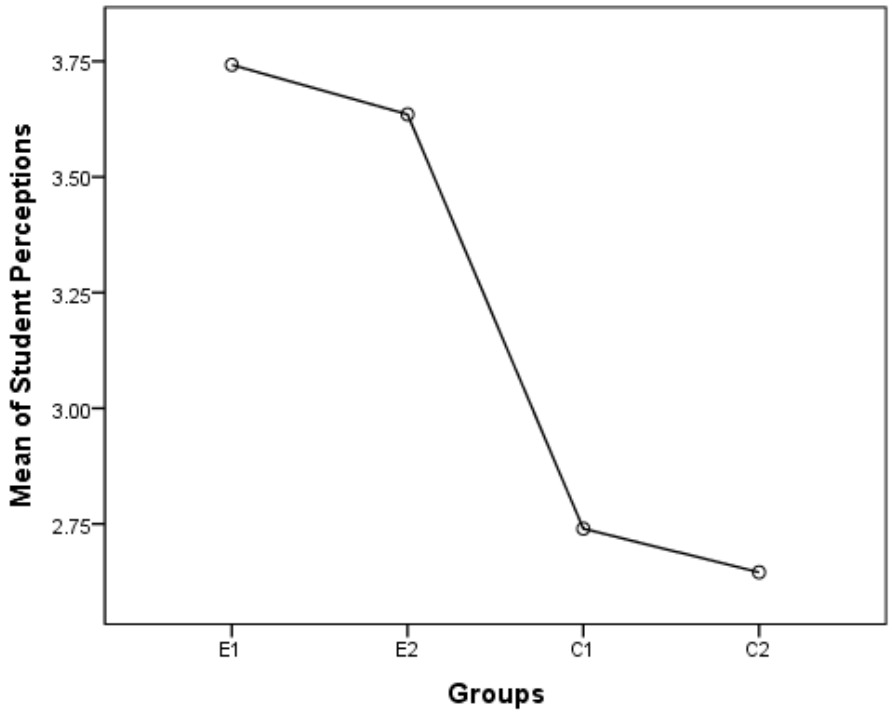

Figure 4: Students Perceptions of Classroom Environment Post-test Mean Scores Obtained by the Students in the Four Groups.

From the graphical representation, it was revealed that the mean of student perceptions of classroom environment was high for the experimental groups as compared to the control groups. This may imply that the cooperative approach of learning had an effect on the perceptions of students' classroom environment in the sampled schools of this study. The observed differences in the students' perceptions of the classroom environment post-test mean scores between the experimental group 1 and experimental group 2 as well as the differences in the post-test scores between control group 1 and control group 2 may be the effect of prior exposure to the same guide on student perception of the classroom environment towards learning. To establish whether the observed differences were statistically significant or were just by chance, the study carried out Analysis of Variance (ANOVA). The ANOVA results are as shown in Table 22.

Table 22: ANOVA of the Post-test Score on the Students' Perceptions of Classroom Environment

	Sum of Squares	DF	Mean Square	F	Sig.
Between Groups	53.646	3	17.882	190.024	0.000
Within Groups	19.385	206	0.094		
Total	**73.032**	**209**			

The obtained results are that $F(3,206)=190.024$, $P<0.05$. These results implied that there were statistically significant differences in students' perceptions of Classroom environment post-test mean scores between the four groups. This implied that the differences observed were not just by chance and therefore, rejecting the null hypothesis of F-Test that states that there are no significant differences between the measured groups in a test. Analogously, the second hypothesis of the study stated that there is no statistically significant effect of cooperative learning approach on public co-education secondary schools students' Perception of Classroom Environment in Nakuru, County Kenya was rejected. This led to the conclusion that cooperative learning approach improved the students' Perception of Classroom Environment of learning in public co-education secondary schools in Nakuru, County Kenya.

The ANOVA test is done to show which among the four groups were different and to what extent the differences are. In order to establish the groups that had differences and the significance of the differences, the study used pair wise comparisons of the groups by applying Least Significant Difference (LSD) Post Hoc Comparisons of Students' Perceptions of the Classroom environment Post-test Means for Four Groups. This was done in order to easily explain interpretations on the differences observed. The results are as depicted in Table 23.

Table 23: Least Significant Difference (LSD) Post Hoc Comparisons of Students' Perceptions of Classroom environment Post-test Means for Four Groups

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
	E2	0.10712	0.06220	0.087(NS)
	C2	1.09680*	0.05886	0.000
	E1	-1.00260*	0.05429	0.000
C1	E2	-0.89548*	0.06454	0.000
	C2	0.09420	0.06133	0.126(NS)
	E1	-0.10712	0.06220	0.087(NS)
E2	C1	0.89548*	0.06454	0.000
	C2	0.98968*	0.06843	0.000
	E1	-1.09680*	0.05886	0.000
C2	C1	-0.09420	0.06133	0.126(NS)
	E2	-0.98968*	0.06843	0.000

*The mean difference is significant at the 0.05 level.

(NS) –Not Significant

According to Table 23, Least Significant Difference (LSD) Post Hoc shows the differences in any two groups. The results revealed that there were significant differences between groups E1 and C1, E1 and C2, C1 and E1, C1 and E2, E2 and C1, E2 and C2, C2 and E1, and between groups C2 and E2 in respect to students' Perception of Classroom Environment. This is because of the p-values being less than 0.05, which was the chosen significance level for the study. However, there were no significant differences between groups E1 and E2, C1 and C2, E2 and E1, and between groups C2 and C1. This was due to the p values being greater than 0.05. This therefore implied that the prior exposure to the instrument Student Perception Guide (SPG) Classroom environment had no significant effect on their perceptions of Classroom environment.

In general, the results indicated that experimental groups outperformed the control groups in Classroom environmental perceptions towards learning of English. This implied that the use of cooperative learning approach in teaching of English improved

the students' perceptions of the classroom environment towards learning of the subject. In line to this, Rowntree (2018) found that there were statistically significant differences in the perception of learning environment between the control and group. In respect to this, students taught using cooperative learning approach had positive learning approach compared to those who were taught using conventional methods. Costa et al. (2020) revealed that the learning environment was more motivating to the learners as well as the teachers. The students' perceptions of learning environment improved under cooperative learning approach and students viewed as conducive for problem solving, critical thinking and improved time management of both teachers and learners. Since there were no significant differences in the post-test scores of students' Classroom environmental perceptions towards learning between groups E1 and E2, C1 and C2, E2 and E1, and between groups C2 and C1, the study combined the E1 and E2 as an experimental group and C1 and C2 as the control group. Table 24 shows the comparison of the students' perceptions of Classroom environment post-test mean scores and between the experimental and control groups combined.

Table 24: Comparison of the Students' Perceptions of the Classroom Environment Post-test Mean Scores between the Experimental and Control Groups

Test	Group	N	Mean	SD	Std. Error Mean
Perceptions of Classroom Environment	Experiment (E_1,E_2)	108	3.7056	0.30535	0.02938
	Control (C_1,C_2)	102	2.6990	0.31324	0.03102

Table 24 shows that the experiment groups had a favorable Perception of Classroom Environment as compared to the control groups. This is because of the mean score of 3.7056 for the post-test results of the experimental groups and a mean score of 2.6990 post-test results for the controls groups. An Independent Samples t-test of Students' Perceptions of the Classroom environment Post-test Mean Scores between the

Experimental and Control Groups was performed to establish whether the differences were statistically significant. Table 25 displays the achieved results of the t-test.

Table 25: Independent Samples t-test of Students' Perceptions of the Classroom Environment Post-test Mean Scores between the Experimental and Control Groups

Test	Group	N	Mean	SD	t-value	DF	P-value
Perceptions of Classroom Environment	Experiment	108	3.7056	0.30535	23.577	208	0.000
	Control	102	2.6990	0.31324			

The study revealed that there were significant differences in the mean scores of the two groups under investigations. This is due to t-test results showing that $t(208)=23.577$, $P<0.05$. This is in line to the finding of Ferguson-Patrick (2020) who noted that through the cooperative learning approach, students developed positive and effective engagement skills. In respect to this, it was noted that cooperative learning approached promoted inclusivity among culturally diverse students. However, these results differ with those by Keramati and Gillies (2021) revealed that students were unfamiliar with their expectations in using cooperative learning approaches. It was also found that there were challenges in grading performance while using cooperative learning approaches. Another challenge included different cultures among the students and thus limiting the interaction of students in cooperative learning approach.

From this results, the study carried out a gain analysis whose purpose was to examine the effect of cooperative learning approach on the students' Classroom environmental perceptions towards learning between the control group 1 (C1) and experimental group 1 (E1). The results are as shown in Table 26.

Table 26: Gain Analysis on Students' Perceptions of Classroom Environment Post-test Mean Scores for E_1 and C_1 Groups

Stage	Scale	E1	C1
Pre-Test	N	71	58
	Mean	2.3042	2.3397
Post-Test	N	71	58
	Mean	3.7423	2.7397
Mean Gain		**1.4381**	**0.4000**

The pre-test result for Students' Perceptions of Classroom environment for E1 was2.3042 and its post-test result after exposure to cooperative learning approach was 3.7423. This presented a gain of 1.4381 in the students' perception of Classroom environment which was measured in a Five Point Likert Scale. This gain is equivalent to 35.95% increase in the students, perceptions of the Classroom environment. On the other hand, the gain analysis on the control groups shows a gain of 0.4 which is equivalent to 10% increase in the students' perception of Classroom environment. The control group was subjected to conventional approach of teaching and therefore this accounted for 10% of favourable perception towards increase. When comparing the two groups, it then implies therefore that cooperative approach of teaching was more effective in improving the learners Perception of Classroom Environment as compared to the conventional approach of teaching English.

However, since the pre-test results for the E1 and C1 were not the same, the initial differences could have resulted in the differences observed at the post-test results. In respect to this, the pre-test result for the control group was 2.3397 while that of the experimental group was 2.3042. This therefore necessitated for the standardization of the results for the post-test mean scores using pre-test results as covariates. The aim of standardization of the results was to remove any biasness in the examination of the results leading to wrong inferences due to the pre-existing differences in the groups

under investigation. This was done using ANCOVA and the results are shown in Table 27.

Table 27: Adjusted Students' Perceptions of Classroom Environment Post-test Mean Scores for E_1 and C_1 with Pre-test Scores as Covariates

Test	Group	N	Observed Mean	Adjusted Mean
Perceptions of Classroom	E1	71	3.7423	3.757
Environment	C1	58	2.7397	2.721

Table 27 shows that the observed Students' Perceptions of Classroom environment Post-test Mean Scores for E1 was adjusted from 3.7423 to 3.757 while those of the C1 were adjusted from 2.7397 to 2.721. The adjusted Students' Perceptions of Classroom environment Post-test Mean Scores for E1 and C1 with Pre-test scores as Covariates were different. To examine whether the difference was statistically significant, the study used ANCOVA as shown in Table 28.

Table 28: ANCOVA Test Results Comparing Students' Perceptions of Class Environment Post-test Mean Scores

	Sum of Squares	DF	Mean Square	F	Sig.
Pre-Test Scores	9.005	1	9.005	533.388	0.000
Perceptions of Classroom Environment	34.116	1	34.116	2020.828	0.000
Error	2.127	126	0.017		
Total	**1440.780**	**129**			

The ANCOVA Test results comparing students' perceptions of Classroom environment Post-test Mean Scores indicated that there were significant differences in the adjusted scores of student's perception of the Classroom environment between E1 and C1. This is due to $F(1,126)=2020.828$, $p<0.05$. It is on the bases of these findings that the study confirms the rejection of the second study hypothesis that there is no statistically significant effect of cooperative learning approach on public co-educational secondary

schools students' Perception of Classroom Environment in Nakuru, County Kenya. The study therefore concluded that there is statistically significant effect of cooperative learning approach on public co-educational secondary schools students' Perception of Classroom Environment in Nakuru, County Kenya. The extent of the effect is as shown in the gain analysis in Table 29.

Table 29: Gain Analysis on Adjusted Students' Perceptions of Classroom Environment Post-test Mean Scores for E_1 and C_1 Groups

Stage	Scale	E1	C1
Pre-Test	N	71	58
	Mean	2.3042	2.3397
Post-Test	N	71	58
	Mean	3.757	2.721
Mean Gain		**1.4528**	**0.3813**

The initial Students' Perceptions of the classroom environment Post-test Mean Scores for E_1 was 2.3042 and after the use of cooperative learning approach, their perception towards learning improved from 2.3397 to 3.757. This is a gain of 1.4528 in a five point Likert scale coded as; strongly Agree=5, Agree=4, Not Sure=3, Disagree =2 and Strongly Disagree=1. This represents a gain of 36.32% in students' perception of classroom environment in using cooperative learning approach. On the other hand, the initial Students' Perceptions of classroom environment Post-test Mean Scores for C1 was 2.3397 and after continuing to use the conventional teaching approach, their perceptions towards learning improved with a minimal margin of 0.3813 to 2.72. In respect to the used Likert scale, this represents a gain of 9.53% in students' perceptions towards learning. Comparing the two margins of gain between the groups (36.32% for E1 and 9.53% for C1), the study concludes that cooperative learning approach is more effective in improving students' classroom environment perceptions towards learning in public co-education secondary schools in Nakuru, County Kenya than conventional methods of

teaching the subject. This further implies that the students' classroom environment perceptions towards learning is about 25% more favourable for those students' taught using cooperative learning approach as compared to those taught using conventional teaching methods. As established in the conducted interviews, students and teachers were in agreement that cooperative learning created positive classroom environment view towards the English content taught in class.

Student Excerpt 2:

> *"Cooperative learning approach has immensely changed my classroom environment view towards learning. I now like the classroom environment where learning takes place so much as opposed to how I liked it when our teachers were not placing us in small groups to discuss various concepts. In fact, English is now my best subject".*

Teacher's Excerpt 2:

> *"Personally, I like using the cooperative approach in teaching English. Since I started using this approach like a one month ago, students have started liking the subject and you can even find them discussing English content at their own free time. It has completely changed the students' perceptions of the subject to the positive and I am happy with that". Our roles have changed, learning is student centered and students are active as opposed to being passive as was the case earlier, and mine is to guide the process.*

These findings are in line with those by Wekesa (2015) who noted that cooperative learning approach resulted to positive attitudes towards learning and less disruptive behaviours in the Biology classroom. The author also averred that cooperative learning yielded positive and supportive relationships with peers as well as more positive attitudes toward subject areas, and higher self-esteem among the learners. On the same context, Molla and Muche (2018) noted that students enjoyed cooperative learning in the class as

opposed to conventional teaching approaches. In respect to this, the Molla and Muche (2018) noted that students developed positive attitudes towards the subjects taught using cooperative learning approach.

The current study concurred with studies by Wangila (2015) and Sharan (2018) since the two studies established that there were significant differences in the student perceptions of classroom environment towards learning different subjects like Biology and Chemistry that were taught using different teaching approaches. The authors noted that the subjects that were taught using cooperative learning approach were highly liked by students as compared to those that were taught using conventional approaches. In line to this assertion, Wambugu, Changeiywo, and Ndiritu (2014) who noted that the use of the cooperative learning approach changed the classroom environmental perceptions of the students from negative perceptions to positive perceptions and therefore determining their choice of subjects for KCSE registration.

The current findings further concur with those by Kinya (2018) who noted that the use of computer aided instruction just like the cooperative learning approach was a significant predictor of student perceptions towards the subject. Kinya (2018)noted that both methods of learning were instrumental in shaping the perceptions of the students towards learning a given subject. It was established that cooperative learning encouraged students to contribute to learning in terms of generation of ideas, asking questions and also improving their communication skills through their interactions in small groups. This was found to have created favourable perceptions in the subject taught using cooperative learning. Similarly, a study by Tanui (2014) concurs with the current findings, by establishing that cooperative learning approach resulted to positive interdependence and hence improving the classroom environment perceptions of students towards the subject of study.

In agreement to the current study findings, Vladimir and Salinas, (2016) revealed that majority of the teachers felt that cooperative learning approach reduced the workload of teachers. Similarly, Williams (2018) established that students liked cooperative learning approach for it developed their social skills and inter-personal communication skills during the debates and small group discussions in the class. The study also revealed that the students had positive perceptions towards learning the subjects that were taught using cooperative learning approach.

The findings of the current study also agreed with those by Keter, Wachanga, and Anditi (2017) who established that learning using cooperative learning approach in class was enjoyable to teachers. Keter (2018) also established that through the use of cooperative learning, teachers found out that learning activities were enjoyable compared to extra-curricular activities. Similar to the current study findings, Jepkosgey (2018) indicated that students enjoyed learning when they were let to discuss in small groups as opposed to lecture-based teaching.

However, some studies showed disagreement to the current study findings. A study by Gillies (2016) in Australia established that there were negative attitudes in the use of the approach due to the small class sizes for the implementation of cooperative learning approach. Others indicated that the use of cooperative learning approach resulted to a noisy classroom. Other negative experience in the use of the CLA as indicated by the teachers was too much preparation time for a class in the event of use of cooperative learning approach. Similarly, a study by Altun (2015), found out that teachers had negative attitudes towards the use of cooperative learning. It was further revealed that teachers found it hard to evaluate students through the use of CLA and that teachers were unable to recommend on the performance of students in the small groups. The study by Altun (2015) focused on teachers perceptions while the current study focused on student

perception and therefore it differed with the current study. Sharan (2018) also noted that cooperative learning approach placed too much emphasis on developing students' social skills and was appropriate only for the bright students and therefore unhelpful to weak students. The study by Sharan (2018) however relied on feedback collected from teachers and therefore differs with the current study that collected data from both the teachers and students.

4.5 Effect of Cooperative and Conventional Learning Approaches on Students' Achievement in English Test

The third objective of the study sought to establish the effect of cooperative and conventional learning approaches on academic achievement in English in county co-educational secondary schools, Nakuru County, Kenya. The academic achievement in English was measured using an English Achievement Test (EAT) developed by the researcher to make it serve the purpose of this study. The test items constructed were based on the topics of grammar, oral poetry, poetry appreciation and cloze test. Performance in grammar and Performance in poetry were summed up and expressed into a percentage. The scores in the English Achievement Test (EAT) ranged from 0-100. The same test was administered six times; two times as a pre-test for two groups and four times as post-test for the other four groups. The Pretest was carried out to show the initial competencies of the students in English test before treatment for both the experiment and control groups while the post-test was used to show the effect of cooperative learning approach on the English Achievement Test in public co-education secondary schools in Nakuru County, Kenya. The effect of familiarity in the pre-test and post-test was statistically controlled using ANCOVA and only gain analysis was observed. Table 30 shows the pre-test mean scores of EAT for experiment group 1 and control group 1.

Table 30: Comparison of Pre-test Means of Groups on Students' Achievement in English Test

Test	Group	N	Mean	SD
Achievement in English Test	E1	71	57.5352	3.45101
	C1	58	55.4138	3.67082

Table 30 shows that the academic achievement of students' in English Achievement Test (EAT) was 57.5352 for the experiment group E1, and that for the control group C1 was 55.4138. This implied that the experiment group E1 had a higher academic achievement in EAT as compared to that of the control groups. The study sought to test whether the observed differences in the achievement in EAT was significant at 5% significance level. This was done by the use of Independent Samples t-test as shown in Table 31.

Table 31: Independent Samples t-test of the Pre-test Scores of Students' Achievement in English Test

Test	Group	N	Mean	SD	t-value	DF	P-value
Achievement	E1	71	57.5352	3.45101	3.375	127	0.001
in English Test	C1	58	55.4138	3.67082			

The results for the independent samples t-test indicated that the differences in the pre-test mean scores in Students' Achievement in English Test were significant at 5% significance level. This is due the t-statistics value of 3.375, DF=127 and $p<0.05$. This therefore implied that the control group and the experiment group were non-equivalent in terms of the academic achievement in English Subject. The study included non-equivalent groups and each group represented a school, from School A to School D and therefore the schools had different level of academic performance in overall, due to school factors and different individual capabilities of each of the students. Each school enrolled students with different Kenya Certificate of Primary Education (KCPE) results and therefore the observed differences in academic achievement of the students in EAT

were from different schools. Since the study was on public co-educational secondary schools, which were only five in number in the county, one of them was used for piloting and the other four as participants. Allocation of treatment was done randomly to the remaining four schools and therefore had no control on the differences that existed in the schools. However, the pre-existing differences were re-adjusted as shown in Table 38.

After the pre-test, E1 and E2 were subjected to cooperative learning approach in English subject and groups C1 and C2 continued to be taught using conventional methods. After a period of four weeks, the groups were given an English Achievement Test and the Post-test Means of Groups on Students' Achievement in English Test recorded. Table 32 shows the comparisons between the mean score of the different groups in the post-test.

Table 32: Comparison of Post-test Means of Groups on Students' Achievement in English Test

Test	Group	N	Mean	SD
Achievement in English	E1	71	77.4366	3.47124
Test	C1	58	61.4138	3.67082
	E2	37	76.4324	4.32397
	C2	44	60.1591	3.88164

According to Table 32, the mean score of the post-test scores for the E1 was 77.4366, for C1 was 61.4138, for E2 was 76.4324 while that for C2 was 60.1591. The standard deviation on the other hand was below five in each case. A standard deviation of above five would imply a complete shift in the academic mean grade in the English Achievement Test. A standard deviation of less than five would imply that the variation is within the scope of the mean grade of the test. Therefore the achieved standard deviation in the post-test results was close to the mean and that they varied within an academic mean grade scope. Figure 5 shows the graphical representation of the EAT post-test scores for the four groups.

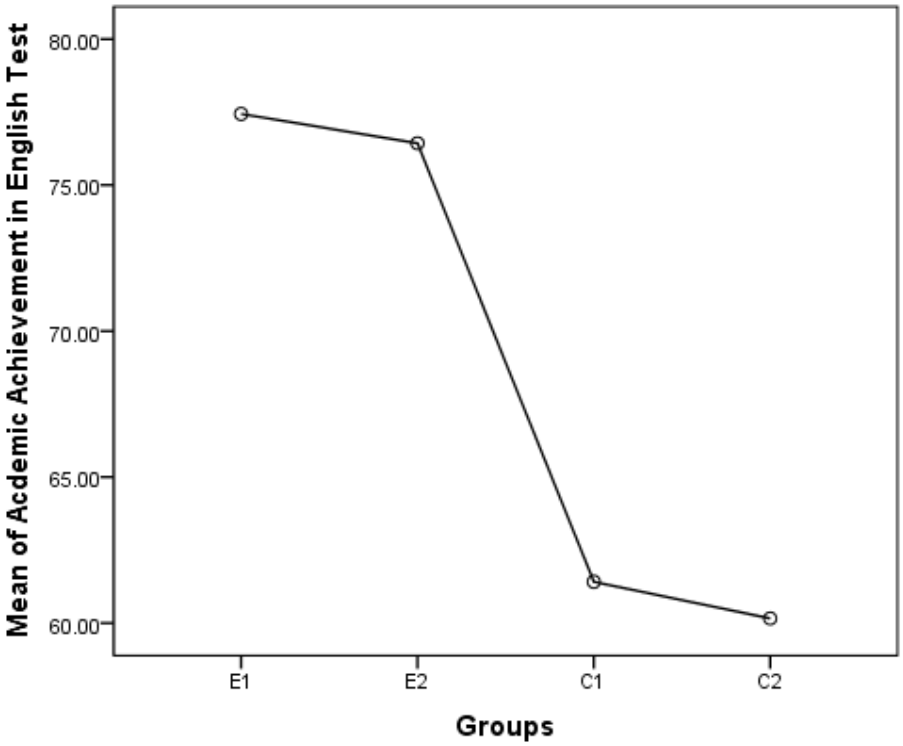

Figure 5: Students' Achievement in English Test Post-test Mean Scores Obtained by the Students in Four Groups

From the graphical representation of the post-test results, it was established that the mean scores for the post-test in EAT were different for the experimental groups and the control groups. The Experimental groups performed better in the EAT as compared to the control groups. The differences observed could be as a result of the effect of cooperative learning approach used on the experimental groups. To test whether the differences in the mean scores in English Achievement Test for the different groups were significant, the study used ANOVA and whose results are shown in Table 33.

Table 33: ANOVA of the Post-test Score on the Students' Achievement in English Test

	Sum of Squares	DF	Mean Square	F	Sig.
Between Groups	13864.856	3	4621.619	324.656	0.000
Within Groups	2932.501	206	14.235		
Total	**16797.357**	**209**			

From the ANOVA test results in Table 33, the study revealed that there were significant differences in the post-test mean scores of the different groups in the study. This was due to the p-value being less than 0.05 and F(3,206)=324.656. This therefore led to the rejection of the null hypothesis of the F-Test that states that there are no significant differences in the measured groups. Similarly, the third hypothesis of the study which stated that there was no statistically significant effect of cooperative learning approach on student achievement of English in public co-education secondary schools in Nakuru, County Kenya being rejected. However, the F-test of the ANOVA does not indicate which groups differ from the others and therefore the study carried out Post Hoc comparisons using Least Significant Difference (LSD). The results were presented in Table 34.

Table 34: Least Significant Difference (LSD) Post Hoc Comparisons of Students' Achievement in English Test Post-test Means for Four Groups

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
	E2	1.00419	0.76501	0.191 (NS)
	C2	17.27753	0.72390	0.000
	E1	-16.02283	0.66779	0.000
C1	E2	-15.01864	0.79384	0.000
	C2	1.25470	0.75430	0.098 (NS)
	E1	-1.00419	0.76501	0.191 (NS)
E2	C1	15.01864	0.79384	0.000
	C2	16.27334	0.84159	0.000
	E1	-17.27753	0.72390	0.000
C2	C1	-1.25470	0.75430	0.098 (NS)
	E2	-16.27334	0.84159	0.000

*The mean difference is significant at the 0.05 level.

(NS) –Not Significant

Focusing on the Post Hoc results for the pairwise comparisons, it was revealed that there were significant differences in the Students' Achievement in English Test, Post-test

Means for the groups E1 and C1, E1 and C2, C1 and E1, C1 and E2, E2 and C1, E2 and C2, C2 and E1, and between groups C2 and E2. This was due to the associated p-values for the test being less than 0.05. It was further revealed that there were no significant differences between groups E1 and E2, C1 and C2, E2 and E1, and between groups C2 and C1. This was because of the p-values being greater than 0.05. The results implied that there were significant differences between the control groups and the experimental groups and insignificant differences within each set of group.

This therefore implies groups E1 and E2 that had statistically equal post-test mean scores in the EAT and that the small differences observed between the E1 and E2 were just by chance. Similarly, the groups C1 and C2 had statistically equal post-test mean scores in the EAT and any differences observed between them were statistically insignificant. This further implies that prior exposure to the EAT did not have significant influence on the post-test scores. These results therefore imply that E1 and E2 could be combined and studied together as an experimental group and C1 and C2 could be combined into one group, that is, control group. These results of the two groups that is, experimental and control group, are as shown in Table 35.

Table 35: Comparison of the Students' Achievement in English Test Post-test Mean Scores between the Experimental and Control Groups

Test	Group	N	Mean	SD	Std. Error Mean
Achievement in English Test	Experiment (E_1,E_2)	108	77.0926	3.79507	0.36518
	Control (C_1,C_2)	102	60.8725	3.79596	0.37586

Table 35 indicates that the combined mean scores of the post-tests scores in EAT for the experiment groups was 77.0926 while that for the control groups was 60.8725. This implied that the student's achievement in English Test was higher in the experimental

group as compared to control group. The study sought to establish whether there are significant differences in the post-test mean scores of the combined groups (control and experimental). This was done using independent samples t-test and results presented in Table 36.

Table 36: Independent Samples t-test of Students' Achievement in English Test Post-test Mean Scores between the Experimental and Control Groups

Test	Group	N	Mean	SD	t-value	DF	P-value
Achievement in English Test	Experiment	108	77.0926	3.79507	30.952	208	0.000
	Control	102	60.8725	3.79596			

The independent samples t-test results in Table 36 indicated that there were significant differences in the Students' Achievement in the English Test, post-test mean scores between the experimental and control groups. This was evidenced by a t-statistic value of 30.952 and p-value of less than 0.05. This therefore implied that the cooperative learning approach in English Subject was effective in improving the students' achievements in the subject. Alorabi (2019) showed that there were significant differences in the academic achievement of English as a Foreign Language (EFL) between the cooperative learning approach and conventional learning approach. In regard to this, it was found that students taught using cooperative learning approach performed better than those taught using conventional methods.

In order to determine the extent of the effect of the cooperative learning approach on the student's achievement in English, the study carried out gain analysis on the students' achievement in English test post-test mean scores for E1 and C1 groups. The gain analysis in respect to this aspect is as shown in Table 37.

Table 37: Gain Analysis on Students' Achievement in English Test Post-test Mean Scores for E_1 and C_1 Groups

Stage	Scale	E1	C1
Pre-Test	N	71	58
	Mean	57.5352	55.4138
Post-Test	N	71	58
	Mean	77.4366	61.4138
Mean Gain		**19.9014**	**6.0000**

The pre-test mean scores for the English achievement Test for the E1 group was 57.5352 and after subjecting the students to cooperative learning approach, the achievement improved to 77.4366. This therefore implied that the cooperative learning approach in English was effective in improving the students' achievement in the subject by a margin of 19.9%. Likewise, the pre-test mean score for the C1 group was 55.4138 and the post-test mean score for the same group was 61.4138. This implies that there is an increase margin of 6%. However since the pre-test results for the EAT between the control group and the experimental group were statistically significant ($t(127)=3.375$, $p<0.05$), (Table 4.25) the pre-existing differences before the treatment could have resulted to the observed post-test differences after the treatment. To control for the initial differences in the students' competencies in EAT between the two groups; the study used ANCOVA to standardize the post-test mean scores as shown in Table 31. In the Analysis of the Covariance (ANCOVA), pre-test results for the E1 and E2 were used as the covariate and the results of the adjusted students' achievement in EAT presented in Table 38.

Table 38: Adjusted Students' Achievement in English Test Post-test Mean Scores for E_1 and C_1 with Pre-test scores as Covariates

Test	Group	N	Observed Mean	Adjusted Mean
English Achievement Test	E1	71	77.4366	76.482
	C1	58	61.4138	62.583

The observed results of the students' English Achievement Test post-test mean scores for E1was adjusted from 77.4366 to 76.482 while that for C1 was adjusted from 61.4138 to 62.583. In line to this, Sulisworo and Suryani (2014) revealed that cooperative learning using stay-two stray approach was a significant predictor of academic achievement of students in Physics. In respect to this, students that used cooperative learning approached had a higher academic achievement compared to those who did not. The study further sought to establish whether the adjusted students' achievement in English Test post-test mean scores for E1 and C1 with pre-test scores as covariates significantly differed. The F-test statistics for the ANCOVA are as shown in Table 39.

Table 39: ANCOVA Test Results Comparing Students' Achievement in English Test Post-test Mean Scores

	Sum of Squares	**DF**	**Mean Square**	**F**	**P-value**
Pre-Test Scores	1605.226	1	1605.226	32064.030	0.000
Achievement in English Test	5659.336	1	5659.336	113043.974	0.000
Error	6.308	126	0.050		
Total	**646114.000**	**129**			

Table 39 indicated that there existed statistically significant differences in the adjusted students' Achievement in English Test post-test mean scores for E1 and C1 with pre-test scores as covariates. This is evidenced by the p-value being less than 0.05 and F(1,216)=113043.974. The null hypothesis of F-test stating that there are no significant differences in the variances of two measured experimental and control groups was therefore rejected at 5% significance level. The third hypothesis of the study stating that there is no statistically significant effect of cooperative learning approach on students' achievement of English in public co-educational secondary schools in Nakuru, County Kenya was consequently rejected. The study therefore concluded that cooperative

learning approach was effective in improving the academic achievement of the students in English test.

These findings concur with those by Amaka (2016) who revealed that students using cooperative learning approach achieved higher mean scores compared to those who did not use it. It was further noted the academic achievement of male students was higher than that of female students. Further, Williamson and Garbin (2021) revealed that those students who worked within groups and in using cooperative learning approach performed better in their end of term examinations compared to those who used conventional learning approaches. It was also found that there were significant differences in the performance of the students between the students who used cooperative learning approach and those who used lecture method.

The extent of the effect of the cooperative learning approach was evaluated using gain analysis as shown in Table 40.

Table 40: Gain analysis on Adjusted Students' academic achievement in English Mean Scores for E_1 and C_1 Groups

Stage	Scale	E1	C1
Pre-Test	N	71	58
	Mean	57.5352	55.4138
Post-Test	N	71	58
	Mean	76.482	62.583
Mean Gain		**18.9468**	**7.1692**

Table 40 shows that the adjusted Students' academic achievement in English Pre-Test Mean Score for E1 was 57.5352 and after subjecting the students to cooperative learning approach, the post-test mean score was 76.482. This implied an increase of 18.95% in the student's achievement in English Test (EAT) when cooperative learning approach is used. On the other hand, the pre-test mean score for the C1 was 55.4138 and with

continuous learning taking place, using conventional methods, the post-test mean score was 62.583. This represents an increase in the achievement with a margin of 7.17%. Comparing the mean gain for the two groups of students', it was further established that cooperative learning approach was more effective in improving the academic achievement of students' in the English tests as compared to conventional methods of learning. This further implied that students' using cooperative learning approach are likely to be 12% higher in English achievement test as of when compared to their peers who were taught using conventional methods. This means that if cooperating learning approach were to be used in the teaching of English in all secondary schools in Kenya, and assuming that all secondary schools in Kenya are currently using the conventional teaching method, the national mean would improve by 12%, which would positively impact the learners in terms of grades. That would translate to significantly more of the learners consequently meeting the minimum entry grades to universities and having better career course choices that they would otherwise have missed. Alraddadi (2018) indicated that cooperative learning approach improved the academic achievement of students compared to the conventional learning approaches used on the control group. In respect to this, there were significant differences in the academic achievement of student taught using cooperative learning approach with those taught using conventional methods. However, Guillén-Gámez et al., (2020) found out that pre-service teachers who were taught using cooperative learning approach performed lower than their peers taught using conventional methods.

These findings were also supported by both the students and teachers who were interviewed by this study;

Student's Excerpt 3:

> "*I like cooperative learning approach because through discussions with my peers am able to understand concepts better than when I just read and cram them for purposes of writing in the exam. Through such discussions am able to remember many concepts and therefore able to answer correctly during the exam. I like to associate and take part in small group discussions especially when we are about to do an exam or in revising a past examination paper In doing this am able to learn from my peer group members as they too learn from me".*

Teacher's Excerpt 3:

> *"Using cooperative learning, students are able to organize their thoughts in order to explain them to teammates. This greatly enhances their personal understanding. I will henceforth regularly use cooperative learning approach in future teaching, to assist students to get a good mastery of material, for exam preparation, and improve students' performance in examinations".*

The findings of this study has established that there is a positive and significant relationship between the use of cooperative learning approach, the student perception of the new classroom environment and the performance of students in English language. These findings are also in agreement with those by Nwabueze (2018) who noted that cooperative learning resulted to higher academic achievement among the leaners, high level of reasoning, high critical thinking skills, deeper understanding of concepts, good mastery of learning materials and ability to view issues and concepts from diverse viewpoints. Moreover, a study by Laguador (2016) like the current study, attributed higher academic achievement in the secondary schools to cooperative learning approach.

However, while Laguador (2016) examined academic achievement in general, the current study focused specifically on English Language. Similarly, Njenga (2018) noted that academic achievement of students was significantly predicted by the method that was used in the teaching of the students. In respect to this, Njenga (2018) noted that cooperative learning was a significant predictor of academic achievement of students towards learning of mathematics.

The current study also concurs with that of Chebii, Kiboss, Wachanga, & Anditi (2018) who noted that the use of cooperative learning improved the learning of students in Chemistry Subject. The authors noted that the use of the cooperative learning encouraged more participation of all students in classroom activities and therefore improved their grades in their Chemistry Examinations. Similarly, Robert (2018) noted that cooperative learning improved the students level of understanding in concepts taught in class and their level of knowledge retention in learning of Mathematics. According to Mehta and Kulshrestha (2014), cooperative learning approach was able to improve the learning outcomes of students in Science. The authors further noted that the opportunity that cooperative learning provides to learners was that of presenting, arguing out and defending their ideas which enhanced academic performance of the learners in science subjects.

In agreement to the current study findings, Williams (2018) found out that cooperative learning was associated with high knowledge retention, learning materials masterly, high critical thinking and high academic performance. In line to this, Molla and Muche (2018) noted that there were significant differences in the academic achievement of students taught using cooperative learning and those taught using other conventional methods. In respect to this, Molla and Muche (2018) noted that cooperative learning was more effective in improving the academic achievement of students as compared to

conventional methods. Study findings by Çolak (2015) concurs with those established in the current study in that, Çolak (2015) noted that students taught using cooperative learning methods achieved higher academic grades as compared to those taught using conventional teaching methods. Similar to the current study, Çolak (2015) concluded that cooperative learning was more effective in improving the academic achievement of students in secondary schools.

The study findings further concur with those by Gull and Shehzad (2015) who found out that students who were taught using cooperative learning approach had a higher performance compared to those who were taught using conventional methods in the Education subject in colleges. Page (2017) also found out that schools that were able to apply cooperative learning approach were able to achieve a higher academic mean score as compared to the rest. However, the study presented a contextual research gap for it was done in New Zealand while the current study was done in a Kenyan Context. The current study is also in tandem with the findings by Altun (2015) who established that cooperating learning approach resulted to better academic achievement results as compared to those taught using conventional teaching methods.

The findings by Sharan (2018) are in agreement to the current study findings that indicated that the use of cooperative learning approach improved the participation of students in academic activities and led to high academic mean scores by the students. The study by Sharan (2018) however relied on feedback collected from teachers and therefore differs with the current study that collected data from both the teachers and students. It is also noted that the current study findings are in line with those by Pandya (2017) who established that cooperative learning was more effective in enhancing critical thinking required in learning mathematics as compared to conventional methods of teaching in secondary schools. Saltymakov and Frantcuzskaia (2015) also established

that students that were taught using cooperative learning approach performed better than those that were taught using lecture-based approaches. Obinna-Akakuru, Onah, and Opara (2015) similarly established that use of cooperative learning approach achieved high mean scores in the English test as compared to those using conventional methods in Nigeria.

4.6 Moderating Effect of Gender on Relationship between Cooperative Learning Approach and Students' Academic Motivation, Environmental Perception and Achievement in English

After establishing that there were significant differences in the Academic Motivation, Environmental Perception and Achievement in English based on the learning approach, the study further sought to find out whether the effect was moderated by the gender of the students. The study analysed the effect of gender as a moderating variable on the learning Approaches and Students' Academic Motivation, classroom environmental Perception and Achievement in English. This was done using regression analysis. The first regression was between the cooperative learning approach and the academic motivation of students, with gender as the moderating variable. In this, the first block of predictor variables contained the cooperative learning approach versus the academic motivation of the students. The second block contained the moderator variable, which is gender. Table 41 shows the summary of the regression model.

Table 41: Cooperative Learning Approach versus Students' Academic Motivation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.906[a]	0.820	0.819	0.30795	0.820	578.934	1	127	0.000
2	0.907[b]	0.822	0.819	0.30745	0.002	1.411	1	126	0.237

a. Predictors: (Constant), Cooperative Learning Approach

b. Predictors: (Constant), Cooperative Learning Approach, Gender

The first model obtained an R-value of 0.906 which implied that there was a strong correlation between the predicted values and the observed values of the academic motivation of the students. This therefore implies that the model provides a good-fit-for the data. The first model with cooperative learning as the predictor variable and academic motivation as the predicted variable shows that cooperative learning accounted for 82.0% of the variance in the academic motivation of students. This is because of R-square value of 0.820. The adjusted R-Square value of 0.819, which is less than the R-Square value implied that additional predictor values would improve the model less than expected. This therefore implied that the model was optimal with cooperative learning as the predictor variable and academic motivation as the predicted variable. Focusing on the standard error of the estimate, the study obtained a standard error of the estimate of 0.30795, which was less than 1.00 for a Likert –measured scale, and thus implying that the model was accurate in its prediction.

The second model, and in the addition of gender, the total variance explained increased from 82.0% to 82.2% and thus implying that the gender of students accounted for 0.2% in the academic motivation of the students. The study further checked whether the increase in the prediction due to gender was statistically significant using the F-statistic. The results revealed that though gender accounted for the variance in academic motivation of students, the variance was not statistically significance due to $p>0.05$ ($p=0.237$) for the F-statistic. Therefore the study failed to reject the hypothesis that gender was not astatistically significant moderator in the relation between cooperative learning and the academic motivation of the students. This therefore implied that the gender of the students does not moderate the effect of cooperative learning approach on the academic motivation of the students. This further implies that cooperative learning

approach would yield the same results on academic motivation of students regardless of the gender of the students. These results are in line to those by Melnichuk and Osipova (2017)who noted that cooperative learning approach improved the academic motivation of learners regardless of their gender. These results are further supported by the results in Table 42.

Table 42: Comparison of Post-test Means and SD of Groups on Academic Motivation

Test	Group	N	Boys	Girls	Mean	SD
Academic	E1	71	4.1274	4,1092	4.1183	0.30110
Motivation	C1	58	2.8085	2.8053	2.8069	0.31615
	E2	37	4.0292	4.0248	4.0270	0.32459
	C2	44	2.7003	2.6997	2.7000	0.31916

The results indicated that there were no much differences in the academic motivation of students between the girls and boys. This therefore confirms that academic motivation of students is relatively the same regardless of the gender and the only difference that occur on the academic motivation of the students is due to the learning approach used. The study further sought to find out whether the two models as a whole were statistically significant. This was done using the F-test in the analysis of variance as showed in 43.

Table 43: Model Significance for Cooperative Learning Approach versus Students' Academic Motivation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	54.900	1	54.900	578.934	0.000[b]
	Residual	12.043	127	0.095		
	Total	66.944	128			
2	Regression	55.034	2	27.517	291.110	0.000[c]
	Residual	11.910	126	0.095		
	Total	66.944	128			

a. Dependent Variable: Academic Motivation
b. Predictors: (Constant), Cooperative Learning Approach
c. Predictors: (Constant), Cooperative Learning Approach, Gender

The study further noted that the models as a whole were statistically significant and that the predictors were significant predictors of academic motivation. This is due to P-values less than 0.05. This therefore implied that the relationship between the independent and dependent variable was not random or by chance. Therefore the level of academic motivation of students can be predicted by the learning approach used but not the gender of the students. The study further sought to establish the moderating effect of student gender on the relationship between cooperative learning approaches on the students' classroom perception. The results are shown in Table 44.

Table 44: Cooperative Learning Approach versus Students' Classroom Perception

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.862[a]	0.742	0.740	0.29606	0.742	366.083	1	127	0.000
2	0.868[b]	0.753	0.749	0.29091	0.011	5.544	1	126	0.020

a. Predictors: (Constant), Cooperative Learning Approach
b. Predictors: (Constant), Cooperative Learning Approach, Gender

Table 44 shows that there was a strong correlation between the observed values and predicted values of student's classroom perception when cooperative learning is used as predictor variable. This is due to an R value of 0.862. This shows that the model provides a good fit for the data. The study further established that cooperative learning approach accounted for 74.2% of the variance in the students' classroom perception. This is due to an R-Square value of 0.742. This implied that the model provided good fit for the data. The model prediction would have improved less than expected in adding more predictors due to an adjusted R-Square value of 0.740 which is less than the R-square value.

The standard error estimate was 0.29606 which was less than 1.00 for Likert measured scale. This further implied that the model was accurate in its prediction. The study further noted that on adding gender as a moderating variable, the total variance explained by the model improved from 74.2% to 75.3% and thus implying a 1.1% increase. This increase is attributable to gender of the students. The study further established that the increase attributable to gender of the students was statistically significant. This was due to a p-value less than 0.05. Therefore the hypothesis that the gender of the students was not statistically significant moderator of the relationship between cooperative learning approach and the students' classroom perception was rejected. This further indicated that students will have different perceptions of the classroom environment based their gender. These results are however in contrary to the findings by Sharan (2018)who found that the learning environment percent dint not vary significantly based on gender when cooperative learning approach was used. Table 45 shows the differences in the post-test means of groups on students' perception of classroom environment based on gender.

Table 45: Comparison of Post-test Means of Groups on Students' Perception of Classroom Environment based on Gender

Test	Group	N	Boys	Girls	Mean	SD
Perceptions of	E1	71	3.6012	3.8834	3.7423	0.29163
classroom	C1	58	2.7335	2.7459	2.7397	0.30142
environment	E2	37	3.4974	3.7728	3.6351	0.32250
	C2	44	2.6411	2.6499	2.6455	0.32382

The study further found that students Perceptionof classroom environment was higher in girls as compared to that of boys. This further confirms that girls have favourable perception of learning environment as compared to boys and this could imply better performance on educational outcomes. This results concurs with those by Altun (2015), who also indicated that girls have favourable perception of classroom learning environment when cooperative learning approaches are used. However, there were no significant differences in the Perceptions of classroom environment for the control groups. This is because the learning environment remained the same under conventional learning approaches. The study further sought to find out whether the two models were statistically significant for use and application at 95% confidence interval. The results are as shown in Table 46.

Table 46: Model Significance for Cooperative Learning Approach versus Students' classroom Perception

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	32.089	1	32.089	366.083	0.000[b]
1	Residual	11.132	127	0.088		
	Total	43.221	128			
	Regression	32.558	2	16.279	192.363	0.000[c]
2	Residual	10.663	126	0.085		
	Total	43.221	128			

a. Dependent Variable: Student Perceptions

b. Predictors: (Constant), Cooperative Learning Approach

c. Predictors: (Constant), Cooperative Learning Approach, Gender

The results show that both models were significant and therefore the model provides good fit for the data more than a model without predictor variables. This further confirms that gender of the students has statistically significant moderating effect on the classroom environmental perception of the students. The results further affirm that CLA has better outcome on girls than boys as far as perception of classroom environment is cornered. Therefore the level of classroom environmental perception can be predicted using student gender and the learning approach used by the teachers. Lastly, the study sought to find out whether the level of academic achievement in English could be predicted by cooperative learning approach used and whether the gender of the students moderated the relationship. These results are shown in Table 47.

Table 47: Cooperative Learning Approach versus Academic Achievement in English

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.914[a]	0.836	0.834	3.56220	0.836	645.861	1	127	0.000
2	0.922[b]	0.849	0.847	3.42579	0.014	11.315	1	126	0.001

a. Predictors: (Constant), Cooperative Learning Approach
b. Predictors: (Constant), Cooperative Learning Approach, Gender

Table 47 shows that there was a strong correlation between the observed and predicted values of academic achievement in English. This is due to an R value of 0.914. This shows that the model provides a good fit for the data and that the prediction is close to what was observed from the data collection. The study further established that cooperative learning approach explained for 83.6% of the variance in the Academic Achievement in English Test. This is due to an R-Square values of 0.836. Adjusted R-Square value of 0.834 was less than the R-square value of 0.836 and thus implying that

the additional predictors would improve the model less than expected. This affirms the sufficiency of the predictor variable in the model. The study measured academic achievement in English test in terms of percentage and thus five marks presented the gap between one grade to another. In respect to this, a standard error of estimate of 3.56220 achieved in this study was less than 5.00 marks and thus was considered low. This further indicated that the model had a high precision and thus accurate in its prediction.

The second model presented the effect of the moderating variable used in the study. Gender of the students was used as the moderating variable and the results indicated that gender improved the total variance explained by the model from 0.836% to 84.9% and thus representing an increase of 1.4%. This increase in the total variance explained by the model was statistically significant due to a p-value less than 0.05. Therefore the hypothesis that gender of the students has no moderating effect on the relationship between cooperative learning approach and the academic achievement of students in English test was rejected. This further implied that the effect of cooperative learning approach on the academic achievement in English test depended on the gender of the students. Therefore, though the CLA has a significant effect on the academic achievement in English, CLA obtained higher influence in one gender than the other. In line to these, Page (2017) and Altun (2015) established that girls had a better performance in English subject when cooperative learning approach was used. Table 48 shows the distribution of academic achievement in English test based on gender.

Table 48: Comparison of Post-test Means of Groups on Students' Achievement in English Test

Test	Group	N	Boys	Girls	Mean	SD
Achievement in English Test	E1	71	75.1798	79.6934	77.4366	3.47124
	C1	58	61.0641	61.7635	61.4138	3.67082
	E2	37	74.3655	78.4993	76.4324	4.32397
	C2	44	60.1394	60.1788	60.1591	3.88164

The study established that there were differences in the academic achievement of students between boys and girls when CLA is used for learning. This therefore affirms that though CLA was effective in improving the academic achievement of students in English, girls had better academic achievement in English test when CLA was used compared to boys. However, only small differences were noted between boys and girls in academic achievement in English test when conventional learning method was used. The study further sought to establish whether the two models, with and without the moderating variable, were statistically significant as shown in Table 49.

Table 49: Model Significance for Cooperative Learning Approach versus Students' Classroom Perception

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8195.490	1	8195.490	645.861	.000[b]
	Residual	1611.534	127	12.689		
	Total	9807.023	128			
2	Regression	8328.283	2	4164.142	354.817	.000[c]
	Residual	1478.740	126	11.736		
	Total	9807.023	128			

a. Dependent Variable: Academic Achievement in English Test
b. Predictors: (Constant), Cooperative Learning Approach
c. Predictors: (Constant), Cooperative Learning Approach, Gender

The study found that both the models, with and without the moderating variables, were statistically significant at 5% significance level. This implied that academic achievement of students in English can be predicted using cooperative learning approach and the gender of the students or both. This further implied that the differences that occurred between the two genders in regard to academic achievement in English test when CLA was used did not occur randomly or by chance. Based on the regressions analysis performed on the moderating variable, the study established that there was a significant moderating effect of gender on relationship between cooperative learning approach and students' environmental perception and achievement in English. However, the study noted that there was no significant moderating effect of gender on relationship between cooperative learning approach and students' academic motivation in English.

Based on the foregoing findings and discussions thereto, the next chapter provides the summary, conclusions and key recommendations emanating from this study.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the data analysis, conclusions and recommendations. The summary of the data as well as the conclusions and recommendations are done according to the study objectives. The overall response rate for the study was 86.8%. According to Hall (2015), response rate of at least 80% is sufficient enough to make generalization of study findings to the target population. This therefore implied that the achieved response rate was enough to make generalization on the use of cooperative learning approach on public co-educational secondary schools students' academic motivation, perception and achievement in English in Nakuru County, Kenya.

5.2 Summary of the Study

The study sought to investigate the effect of cooperative and conventional learning approaches on academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya.A Solomon Four-Group Non-Equivalent Control Group Design was used, in which a sample size comprising of 242form three students and 4 teachers from 4 co-educational secondary schools was drawn. The data collection involved interviews, administration of questionnaires on student environmental perception and Academic Motivation as well as English Achievement Test. Data analysis and interpretations employed both quantitative and qualitative techniques. The key findings and recommendations flowing from this study are as presented in the next sections of this Chapter.

5.2.1 The Effect of Cooperative and Conventional Learning Approaches on Students' Academic Motivation in English

The first objective of the study was to determine the effect of cooperative learning approach on students' academic motivation in English in public co-education secondary schools in Nakuru County, Kenya. Students' academic motivation in English was measured by the use of Students' Motivation Questionnaire (SMQ). The instrument was administered six times; two times as a pre-test for two groups and four times as post-test for the four groups. The study established that there was no statistically significant differences at $t(127)=1.4499$, $P>0.05$ in the students' pre-test scores in Academic Motivation between E1 and C1. However, the study revealed that there were significant differences in students' post-test mean scores in academic motivation between groups E1 and C1, E1 and C2, C1 and E1, C1 and E2, E2 and C1, E2 and C2, C2 and E1, and between groups C2 and E2. Further, there were no significant differences between groups E1 and E2, C1 and C2, E2 and E1, and between groups C2 and C1. In general, experimental groups outperformed the control groups in academic motivation in English. This implied that the use of cooperative learning in English improved the academic motivation towards learning of the subject.

The first hypothesis of the study stated that: There is no statistically significant effect of cooperative learning approach on students' academic motivation in English in public co-education secondary schools in Nakuru County, Kenya. This hypothesis was rejected at 5% significance level and the study concluded that there is statistically significant effect of cooperative learning approach on students' academic motivation in English in public co-education secondary schools in Nakuru County, Kenya. The study further revealed that teaching English subject using CLA in public co-education secondary schools in Nakuru County, is likely to result into an improvement in student's academic motivation

with a margin of 37.0%, as compared to teaching of the subject using the conventional methods which would only realize a gain of 7.5%. In respect to this, students taught using cooperative learning approach are approximately 30% more motivated in learning English as compared to those taught using conventional methods.

5.2.2 The Effect of Cooperative and Conventional Learning Approaches on Students' Perception of Classroom Environment

The second objective of the study was to examine the effect of cooperative learning approach on public co-educational secondary schools, students' Perception of Classroom Environment in Nakuru County, Kenya. Data on students' perceptions of Classroom environment was gathered by use of Student Perception Guide (SPG). The results indicated that there were no statistically significant differences in the two pre-test scores for the experimental group E1 and control group C1. The study further revealed that E1 had the most favourable post-test perceptions of Classroom environment, followed by experimental group E2, then C1 and lastly control group C2. ANOVA results indicated that there were statistically significant differences in students' perceptions of Classroom environment post-test mean scores between the four groups. The results revealed that there were significant differences between groups E1 and C1, E1 and C2, C1 and E1, C1 and E2, E2 and C1, E2 and C2, C2 and E1, and between groups C2 and E2 in respect to students' Perception of Classroom Environment. However, there were no significant differences between groups E1 and E2, C1 and C2, E2 and E1, and between groups C2 and C1. In general, the results indicated that experimental groups outperformed the control groups in perceptions of classroom environment.

The second hypotheses of the study stating that there is no statistically significant effect of cooperative learning approach on public co-education secondary schools students' Perception of Classroom Environment in Nakuru, County Kenya was accordingly

rejected. Comparing the two margins of gain between the groups (36.32% for E1 and 9.53% for C1), the study concluded that cooperative learning approach was more effective in improving students' perceptions classroom environment in public co-education secondary schools in Nakuru, County Kenya than conventional methods of teaching the subject. The study further found out that the students' classroom environmental perception was about 25% more favourable for those students taught using cooperative learning approach as compared to those taught using conventional methods.

5.2.3 Effect of Cooperative and Conventional Learning Approaches on Students' English Achievement Test

The third objective of the study was to establish the effect of cooperative learning approach on students' academic achievement in English in public co-education secondary schools in Nakuru, County Kenya. The academic achievement in English was measured using an English Achievement Test (EAT). The scores in the English Achievement Test (EAT) ranged from 0-100. The test was administered six times; two times as a pre-test for two groups and four times as post-test for the four groups. The results for the independent samples t-test indicated that the differences in the pre-test mean scores in Students' Achievement in English Test were significant at 5% significance level. The study revealed that there were significant differences in the post-test mean scores of the different groups in the study. Focusing on the Post Hoc results for the pairwise comparisons, it was revealed that there were significant differences in the Students' Achievement in English Test, Post-test Means for the groups E1 and C1, E1 and C2, C1 and E1, C1 and E2, E2 and C1, E2 and C2, C2 and E1, and between groups C2 and E2. It was further revealed that there were no significant differences between groups E1 and E2, C1 and C2, E2 and E1, and between groups C2 and C1.

The third hypothesis of the study which stated that there was no statistically significant effect of cooperative learning approach on public co-education secondary schools students' academic achievement in English in Nakuru, County Kenya was accordingly rejected. Students' academic achievement in English Pre-Test Mean Score for E1 was 57.5352 and after subjecting the students to cooperative learning approach, the post-test mean score was 76.482. This implied an increase of 18.95% in the student's achievement in English Test (EAT) when cooperative learning approach was used. On the other hand, the pre-test mean score for the C1 was 55.4138 and with continuous learning using conventional methods, the post-test mean score was 62.583. This represented an increase in the achievement with a margin of 7.17%. Comparing the mean gain for the two groups of students, it was established that students using cooperative learning approach are likely to be 12% higher in English achievement test as compared to their peers who are taught using conventional methods.

5.2.4 Moderating Effect of Gender on Relationship between Cooperative Learning Approach and Students' Academic Motivation, Classroom Environmental Perception and Achievement in English

The last objective was to analyze the effect of gender as a moderating variable on the learning Approaches and Students' Academic Motivation, Classroom environmental Perception and Achievement in English. The first regression was between the cooperative learning approach and the academic motivation of students, with gender as the moderating variable. The results revealed that though gender accounted for the variance in academic motivation of students, the variance was not statistically significance due to $p>0.05$ ($p=0.237$) for the F-statistic. This therefore implied that the gender of the students does not moderate the effect of cooperative learning approach on the academic motivation of the students.

The study further sought to establish the moderating effect of student gender on the relationship between cooperative learning approaches on the students' classroom perception. It was further noted that on adding gender as a moderating variable, the total variance explained by the model improved from 74.2% to 75.3% and thus implying a 1.1% increase. Moreover, the study further established that the increase attributable to gender of the students was statistically significant. This was due to a p-value less than 0.05. Accordingly, the hypothesis that the gender of the students was not statistically significant moderator of the relationship between cooperative learning approach and the students' classroom perception was rejected.

Lastly, the study sought to find out whether the level of academic achievement in English could be predicted by cooperative learning approach used and whether the gender of the students moderated the relationship. Gender of the students was used as the moderating variable and the results indicated that gender improved the total variance explained by the model from 0.836% to 84.9% and thus representing an increase of 1.4%. This increase in the total variance explained by the model was statistically significant due to a p-value less than 0.05. Therefore the hypothesis that gender of the students had no moderating effect on the relationship between cooperative learning approach and the academic achievement of students in English test was rejected.

5.3 Conclusions of the study

The study made the following conclusions based on the research objectives;

In respect to the effect of cooperative learning approach on students' academic motivation in English, the study established that there was statistically significant effect of cooperative learning approach on students' academic motivation in English in public co-educational secondary schools in Nakuru, County Kenya. It was further demonstrated

that experimental groups outperformed the control groups in academic motivation in English. Accordingly, the study concluded that the use of cooperative learning in English improves the academic motivation towards learning of English subject. In respect to this, students taught using cooperative learning approach are and would be more motivated in learning English as compared to those taught using conventional methods.

With respect to the effect of cooperative learning approach on public co-educational secondary schools students' Perception of Classroom Environment, the study concluded that there was statistically significant effect of cooperative learning approach on public co-education secondary schools students' Perception of Classroom Environment in Nakuru, County Kenya. Subsequently, the study concludes that cooperative learning approach is more effective in improving students' classroom environmental perceptions towards English in public co-educational secondary schools in Nakuru as compared to those exposed to conventional methods of teaching the subject. The study further concludes that the students' perception of classroom environment towards English is more favourable for those students' taught using cooperative learning approach as compared to those taught using conventional methods.

In regard to the effect of cooperative learning approach on students' achievement in English in public co-educational secondary schools, the study concludes that there is statistically significant effect of cooperative learning approach on students' achievement of English in public co-educational secondary schools in Nakuru, County Kenya. The study further concluded that use of cooperative learning approach improves student achievement in English compared to use of conventional methods.

In respect to the effect of moderating variable, the study concluded that there was a significant moderating effect of gender on relationship between cooperative learning approach and students' environmental perception and achievement in English. Girls had abetter perception of classroom environment and academic achievement in English as compared to boys. However, the study concluded that there was no significant moderating effect of gender on relationship between cooperative learning approach and students' academic motivation in English.

5.4 Recommendations

From the findings of this study, the following recommendations are made for policy making;

i. The study recommends that as one of the key strategies for enhancing student motivation and mitigating relatively low achievement in English examinations, English teachers should use cooperative learning approach (CLA) in teaching of English in secondary schools in Kenya. In respect to this, the study recommends not only progressive but accelerated in-service training for teachers in regard to the use of cooperative learning approach, but also a review of the pre-service teacher training curriculum by both the Kenya Institute of Curriculum Development (KICD) and the Universities in Kenya with a view to taking into account and incorporating learner centered approaches such as cooperative learning approach as a method of teaching English in secondary schools. This measure is at the heart of the new Competence Based Curriculum (CBC) currently being rolled out in Kenya.

ii. The study has demonstrated that enhanced student positive perception of classroom environment can be achieved by way of reconfiguring the teaching and learning approach from conventional teacher-centered to leaner-centered

approaches, rather than the popular opinion which tends to predicate improvement of classroom environment to infrastructural upgrade only. Accordingly, teachers are encouraged to adopt modern constructivism approaches to teaching students especially Cooperative learning approach that is student centered. This will enhance be an important step towards enhanced student achievement in English in the context of scarcity of infrastructural resources.

5.5 Suggestions for Further Research

Though the current study was extensive and covered many aspects of cooperative learning approach of teaching English in Public Co-Educational County Secondary schools;

i. The current study suggests a further research to examine the effect of academic motivation and perception of English on the academic achievement of students in the subject.
ii. The current study used four weeks as treatment period for students due to the timelines for thesis completion and other factors such as costs and therefore suggests a further study to be done involving longer training of teachers in CLA and longer periods of treatment of the classes for example three months. The higher treatment periods may help to see if the effect of CLA could be more pronounced than established in this study.
iii. A further study that interrogates teacher training curricula at Diploma and Degree awarding institutions can be done to establish the adequacy of CLA in preparing prospective teachers.

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APPENDICES

Appendix I: Research Instruments

My name is Sonoi Makini Vitalice a doctoral student in Education (curriculum and instruction) of Kabarak University. This is to request your participation in a research study to explore on the effects of cooperate learning approach on students' academic motivation, perception and achievement in English learning. Your participation in this study is voluntary. You are hereby requested to sign and return the informed consent form before the study begins. The information you will provide was kept in confidence and it's only the researcher who will see the complete form.

At no time shall your name be used in any report of this research study. There are no dangers connected with the study but your participation will require some of your time. One of the benefits that will emanate from the study is that you will contribute to the improvement of future teaching and learning of the English course. The tests will be coded with a number that corresponds with your admission numbers. I will be happy to share outcomes of the study, if you correspond to us at the above address. Thank you again for your willing acceptance to participate in this study. In case of any or suggestion or question, kindly do not hesitate to contact the researcher through the university.

Appendix II: Letter of Consent- Teachers'

School of Education
Kabarak University
P.O.Box private bag,
Kabarak

Informed Consent

Thesis: Effect of cooperative and conventional learning approaches on academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

Researcher: Sonoi Makini Vitalice

Thesis description: This is research thesis of a Doctor of philosophy degree in Education (curriculum and instruction) of Kabarak University. The doctoral student is **Sonoi Makini Vitalice** and the supervisors are **Prof. Fred S. Barasa, Vc,Taita Taveta University and Dr. Benard Chemwei**. The research thesis consisted of findings of the effect of cooperative and conventional learning approaches on academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya. It analyzed teachers' and classroom environment perception on the implementation of CLA in the classroom. Your participation and suggestions are kindly regarded.

Method: Data was compiled from students English achievement test, Student motivation Questionnaire, Student perception Guide, Student interview Guide, and Teacher perception Guide.

Obscurity and Privacy: No one was coerced or conjured to take part in this study, it's on free will bases and you will have the right to withdraw at any stage without any repercussion by advising the researcher. You was asked to fill an interview guide after being exposed to CLA in the school premises.

Participant's identity shall be kept confidential. The study findings shall be kept anonymous even though the researcher may verbatively quote from individual responses. The researcher made sure that the participants in the research are not recognized. You are at liberty to contact the researcher after conclusion of the study so as to ask your views

and opinions, be destroyed. Information collected from the participants shall not be passed to any party other than the researcher. All collected information shall be kept in confidence and the findings shall be discussed with willing participants.

Dangers: No dangers were involved in the research.

Incentives to participants: Participants did not receive any incentive for taking part in the research but the researcher shall share the findings when requested upon.

Persons to get touch with for clarification: Sonoi Makini Vitalice, Prof. Fred Simuyu Barasa and Dr. Benard Chemwei

Thanks in advance.

Suitably fill the boxes below.

1. I have read and understood and do hereby accept to participate in the research.
   Yes □
   No □
2. I agree to fill the interview guide and supply answers to the questions
   Yes □
   No □
3. I agree to the use of anonymity in the findings from of this study.
   Yes □
   No □

Appendix III: Letter of Consent- Students'

School of Education
Kabarak University
P.o. Box private bag,
Kabarak

Informed Consent

Thesis: Effect of cooperative and conventional learning approaches on academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya.

Researcher: Sonoi Makini Vitalice

Thesis description: This is a research thesis of a Doctor of philosophy degree in Education (curriculum and instruction) research proposal of Kabarak University. The doctoral student is **Sonoi Makini Vitalice** and the supervisors are **Prof. Fred Simuyu Barasa and Dr. Benard Chemwei**. The research proposal will consist of findings of the effect of cooperative and conventional learning approaches on academic motivation, environmental perception and English achievement in Public Co-Educational County Secondary schools, Nakuru County, Kenya. It also analyzed student's views on the implementation of CLA in the classroom. Your participation and suggestions was kindly regarded.

Method: Data was compiled from students English achievement test, interviews, and their classroom environment perceptions to CLA.

Obscurity and Privacy: No one was coerced or conjured to take part in this study, it's on free will bases and you was at liberty to get out at any point. You are asked to fill an interview guide after being exposed to CLA in the school premises.

Participant's identity shall be kept confidential. The study findings shall be kept anonymous even though the researcher may verbatively quote from individual responses. The researcher will ensure that there is no way of being recognized. You are at liberty to contact the researcher after conclusion of the study so as to ask your views and opinions, be destroyed. Information collected from the participants shall not be passed to any party

other than the researcher. All collected information shall be kept in confidence and the findings shall be discussed with willing participants.

Dangers: No dangers was involved in the research study

Persons to get in touch with for clarifications: Sonoi Makini Vitalice, Prof. Fred Simuyu Barasa and Dr. Benard Chemwei.

Thanks in advance.

Suitably fill the boxes below.

1. I have read and understood and do hereby accept to be a participant.

   Yes □

   No □

2. I accept to fill the interview guide and supply answers to the questions.

   Yes □

   No □

3. I accept to the use of anonymity in the findings of the study.

   Yes □

   No □

Teachers' Guide to CLA

Before the start of the lesson, teacher shall be able to:

a) Divide students into cooperative groups of 4-5 students per group taking the following points into consideration.
   i. Group heterogeneity-Groups should be limited to four or five students. Encourage group competition and not individual competition.
   ii. Group goals and positive interdependence-a single goal must be established and member should assist one another to achieve the group goals.
   iii. Promotive interaction-Students be made manifest in assisting each other attain objectives for instance team teaching and arriving at consensus through inspiration are ways which can assist the group achieve its goals.
   iv. Personal responsibility- every person should take and make crucial participation towards the objective. This comes in the form of minimum grades, group's averages above a specific level and/or particular contributions to the overall activity.
   v. Interrelationship skills –Constructive linkage occurs only with efficient interpersonal engagement. Skills such as leadership, decision making, clear engagement and handling of challenges' should be instructed to the students.
   vi. Equal opportunity of success- learners in the group should be given an opportunity to participate as individuals.
   vii. Group contest- it's workable when group contesters' are well organized.

Groups work closely in the following activities:

a) English grammar content.
b) Brainstorming sources for help.
c) Discussing and giving answers

Appendix IV: Teachers' Classroom Observation Guide

Cooperative learning approach observation

Date:			Time:	
School:			Form:	
Name of Instructor:			Learners in class:	
Monitoring class			Time	Explanation
Cohort variable	Cohort size			
	Allocating Learners duties			
	Allocating Learners to cohorts			
Environmental variables	Organizing the class			
	Are group members visible to others			
	Distance separating the cohorts			
	Accessibility of learning resources			
Teacher variables	Lesson goals			
	Elaborating assignments and yardstick for achievement criteria			
	Observing and involvement			
Teaching five elements of using CLA	Stating wanted conduct (group skills)	Yes		
		No		
	Structuring positive interdependence	Yes		
		No		
	Organizing personal responsibility	Yes		
		No		
	Encouraging relationships	Yes		
		No		
	Organizing team Learning	Yes		
		No		
Assessment	Evaluating Learners' learning			
	Usage of incentives/ rewards			

Appendix V: Teacher's Perception Guide About Class Classroom Environment.

Teachers' perceptions

Background details

Q1.For how many years have you taught in high school?

Q2 which are your subjects of specialization? And have you ever used CLA in class?

Q3. Which teaching approach was used while training in the university? And how can the training be improved?

Q4.Before your exposure to induction, what would you say of cooperative learning?

Q5. After using CLA can you elaborate what it is?

Q6. What was your best view of learners studying before induction?

Q7. What is your opinion of learners and teachers role be in class?

Q8. Kindly state the duties and roles of an instructor and a learner in a learning environment before training?

Q9. Kindly state and describe roles of learners and instructors in class currently. (CLA factors affecting learning)

Q10. Which factors do you think affect the implementation of CLA? (school, learners and teachers background, learners previous experiences or M.o.E).

Q11. What are the disadvantages of using the conventional teachingapproach? And how do you mitigate them?

Q12. Which are the academic merits of using CLA? (learner's working as a team, productively and academic performance)

Q13.Did the learners find it enjoyable to work in social groups?

Q14(a). What are the demerits of using CLA in terms of teacher practice and planning?(lesson planning, all topic and group composition).

(b). Which factors do you take into account when launching CLA in class?(no. of learners, low and high performers, roles assigned).

(c). which do you consider to be the most essential factor that would make CLA function well with learners in class? (Monitoring, teamwork).

(d). How do you observe your learners' advancement as they teamwork? Incentives

(e). What are your opinions in the usage of incentives in CLA is important?(group or individual) and how? (Criteria)

Assessment

(f). How do you assess students' learning?(evaluation)and how does it aid CLA effort?(assessment).

Appendix VI: Student's Perception Guide on Class Classroom Environment

Section A (Personal information)

A1. Name of your school……

A2. Gender

Male ☐ Female☐

A3. Which form are you?

Form 1 ☐ Form 2 ☐ Form 3 ☐

A4. What is the time duration that your teacher has used cooperative learning approach to teach? (Kindly tick only ONE)

- ☐ Less than a week
- ☐ One week
- ☐ Four weeks
- ☐ One and half months
- ☐ A term

A5. Marks for last term: (kindly tick only ONE)

0-49 ☐ 50-64 ☐ 65-79 ☐ 80-89 ☐ 90-100 ☐

Section: B (General perceptions of cooperative learning approach's {CLA} classroom environment)

Instructions: Kindly tick to what degree you agree or disagree with each of the following. (5= strongly agree 4= agree 3= not sure 2= disagree 1= strongly disagree)

Item	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
B1. I enjoy cooperative learning in the class.	5	4	3	2	1
B2. I do like being instructed English using cooperative learning as opposed to conventional teaching approaches.	5	4	3	2	1
B3. I believe cooperative learning can be used in the instruction of any subject.	5	4	3	2	1
B4. I prefer any discipline instructed through cooperative learning.	5	4	3	2	1

Section C (Academic Results)

Instructions: Kindly to what extent do you agree or disagree with each of the following statement by ticking a number.

(5= strongly agree 4= agree 3= not sure 2= disagree 1= strongly disagree)

In comparison to other conventional teaching styles, applying cooperative learning approach in the English class assisted me to	strongly agree	agree	not sure	disagree	strongly disagree
C1. Comprehend the content of the lesson better than other the conventional teaching styles.	5	4	3	2	1
C2. Develops reasoning initiatives.	5	4	3	2	1
C3. Master skills of solving challenges.	5	4	3	2	1
C4. Retain the English content during the lesson content (memory).	5	4	3	2	1
C5. Concentrate on the assignment.	5	4	3	2	1
C6. Increase studying inspiration.	5	4	3	2	1
C7. Emboldened me to be an independent student.	5	4	3	2	1
C8. Improved my performance in English exam grades as contrasted with conventional teaching styles.	5	4	3	2	1

Section D (Social results)

Instructions: Kindly to what extent do you agree or disagree with each of the following statement by ticking a number.

(5= strongly agree 4= agree 3= not sure 2= disagree 1= strongly disagree)

In comparison to with conventional teaching styles, applying cooperative learning approach in the English class assisted me to	strongly agree	agree	not sure	disagree	strongly disagree
D17. Communication skills.	5	4	3	2	1
D18. Increase in confidence.	5	4	3	2	1
D19. Reduce uneasiness'.	5	4	3	2	1
D20. Increase in self-satisfaction while	5	4	3	2	1
D21. Improve in friendliness.	5	4	3	2	1
D22. Improved in finding solutions to problems.	5	4	3	2	1

Section E (Perceptions regarding teachers' application methodology of CLA and classroom environment)

Instructions: Kindly to what extent do you agree or disagree with each of the following statement by ticking a number.

(5= strongly agree 4= agree 3= not sure 2= disagree 1= strongly disagree)

Item	strongly agree	agree	not sure	disagree	strongly disagree
E23. I feel instructors' application of CLA methodology in class is acceptable.	5	4	3	2	1
E24.The teaching learning resources provided by the instructor are suitable.	5	4	3	2	1
E25. Allocating duties, team leader in teams, helps ins group discourses.	5	4	3	2	1
E26. Allocation of learners into different cohorts is appropriate.	5	4	3	2	1
E27.Having strong and weak-achievers in the same group assists improve studying of strong-achievers.	5	4	3	2	1
E28.Having strong and weak- achievers in the same group assists improve the studying of low-achievers students.	5	4	3	2	1
E29.Having strong and weak-achievers in one team c improves studying the whole cohorts of learners.	5	4	3	2	1
E30. Evaluation process is just and acceptable for cooperative learning activities.	5	4	3	2	1

E31. Most appropriate learner population of a team (check only ONE)

2 learners☐ 3-4 learners☐ 4 -5 learners☐ 5 and above☐

Section F (Learners' responsibility in group work)

Directions: Kindly tick the degree to which you agree or disagree with each statement by encircling a number.

(5= strongly agree 4= agree 3= not sure 2= disagree 1= strongly disagree)

Item	strongly agree	agree	not sure	disagree	strongly disagree
F1. The group members labor collaboratively in order to achieve similar objectives.	5	4	3	2	1
F2. In a cooperative group learners care and assist themselves	5	4	3	2	1
F3. The group members share learning resources	5	4	3	2	1
F4.Group members participate in discussing the assignment amongst themselves.	5	4	3	2	1
F5. Group member gives and accept feedback.	5	4	3	2	1
F6. Group members encourage and praise each other.	5	4	3	2	1
F7. Each team members contributes to the group.	5	4	3	2	1
F8. Group associates check each other's	5	4	3	2	1
F9. Occasionally a few individuals attempt all or one or two do not participate.	5	4	3	2	1
F10. Group members have good social initiatives.	5	4	3	2	1
F11. Members of the group find solutions even in disagreement amongst themselves.	5	4	3	2	1
F12. Group associates make decision skills e.g accepting the opinion of others	5	4	3	2	1
F13. Group associates have leadership skills e.g guiding, supervising.	5	4	3	2	1
F14.Group associates deliberate on positive and negative members acts in the team.	5	4	3	2	1
F15. Group associates take action on behaviours to be approved, stopped or discontinued.	5	4	3	2	1

Appendix VII: Students' Interview Guide about their Classroom Learning Environment

Academic and social outcomes

1. Do you fancy joining and participating in learning with other team group members? If no, why?
2. What experiences have you gotten while learning and working in groups?
3. What is your opinion when comparing the usage of CLA with those of conventional teaching styles in terms of benefits?
4. Is Cooperative learning of any help to you academically? If no, why?
5. Since using CLA, have your social skills and engagements improved? If no, why?

Methods and Approaches Embraced by the Teacher

1. In your view, Suggest some of the functions and roles that your teacher had while teaching English in class
2. Which are some of the activities, related to your teacher while implementing CLA steps in class?
3. Which activities, relating to your teacher while implementing CLA steps in class did you dislike?

Conduct of Learners in Group Work

1. Do you and other learners relate/jell well while learning together in groups?
2. How do you and other learners achieve and attain group objectives?
3. In what ways do you help other team members accomplish group goals?
4. Name the things that make CLA activities to function well?

Problems associated with working cooperatively/together

1. In your views, mention some of the problems or challenges encountered when using CLA?
2. What are your opinions, regarding how to control those challenges and problems?

Appendix VIII: English Achievement Test Grammar

School:_____

Gender: Male [ ] Female [ ]

Admission Number_____

Type of School (check ✓ one)

(a) Girls' only [ ]

(b) Boys' only [ ]

(c) Mixed [ ]

Rewrite According to the given Instructions make sure you discuss as a group all the questions (Academic Outcomes) (20mks)

1) Wanjiru did not complain. He did not report to the police. (Begin: Wanjiru neither…….)
2) He never came late to school last year. Begin: Not once…….)
3) My sister's result was not up to my expectations. (Use:…… not as good as…….)
4) You should not have disobeyed your father; that is why you are in trouble. (Begin: If…….)
5) I am standing because there are no chairs. (Write a "wh" question that matches the answer given in this sentence).
6) Mary is clever. Jane is clever too. Ruth is cleverer than Mary and Jane. (Join using a superlative).If he is not ill, he will come (Rewrite using provided)
7) Joan has several friends. All of them are ballet dancers. Her mother is the president of our Judo Club (Combine into one sentence using relative pronouns)
8) The visitor treads on the carpet with his muddy shoes (Rewrite in the past tense).
9) One of my cousins has gone to the USA. (Begin: A cousin…….).
10) A letter was slipped under the door (Change into the active voice)
11) Please sit down, _____? (add a question tag)
12) There was somebody at home. (Negate the sentence)
13) Is she able to work? (Use the word 'ability' in the sentence)
14) Though the journey was rough, the solders marched on. (Rewrite using in spite of")
15) One of the cats (scratch, scratches) children. (choose the correct option)

16) I have never heard of such recklessly wasteful spending. (Replace the underlined phrased with one word)

17) The (Chinese, yellow, wonderful, little, toy (Rewrite putting the adjectives in the correct order

18) The secret is between you and_____(l/me) choose the correct option)

Complete using the correct form of the word in Brackets (Discuss the task (Social Outcomes) (10mks)

1. He is a very _____character (humour)
2. She sang beautifully to the_____ (accompany) of the guitar.
3. Do you know the correct _____(pronounce) of the word?
4. The job was done in utmost_____(precise)
5. _____(jealous) is often destructive
6. Such _____(believe) are outdated.
7. I cannot tell you what the _____(broad) of the room is.
8. She opted for the task that would require the _____ attention (little)
9. Phil Collins is a famous _____ all over the world. (Piano)
10. His poor _____ made him to be laughed at (pronounce)

Fill in the Correct Preposition (Promotive Outcomes (5mks)

1. Tom agreed _____ Lona's idea of punishing the culprit.
2. The performers feel indebted _____ the school for the use of the hall.
3. The answer is _____ the top of the page.
4. There once lived a father and a son _____ a farm.
5. She is good _____ languages.

Cloze Test (Social Outcomes) **(20mks)**

Every year, we look _____ to Christmas as a time for festivity and family get together. The jovial atmosphere that surrounds the seasons lifts our spirits. Families make last minute _____ to the supermarkets to buy gifts for loved ones. _____, we forget that January is coming with _____ challenges. The sooner you _____ planning, the better. This will help you avoid going _____ in your expenditure. Most people take this time to _____ their upcountry home, creating transport _____ all over. A reunion of relatives is always the joy of Christmas so to say. To some, it is just the onset of misery. This is because they don't have anything to _____. The last week of the year is always injury time. Either they do not have anything to give or they are worried over _____ and its responsibilities.

Oral Poetry (Social and Academic Outcome) **(20mks)**

Blackwood between carefully bowed legs
The eyes red over bellows and smoke
The sharpening of axes, adzes and carvers
The chopping, the whittling and such
Carving such scooping and scooping
Then the sandpapering and smoothing
Blackwood between carefully bowed legs
Such energy release and the price
Bargained away, would you imagine
Now a broken symbol thrown careless
In the hook of a curio-shop: a lioness
Broken legs, broken neck, broken udder?

Questions

1. Identify any 2 features that enhance the rhythm of the poem (2mks)
2. For each of the words below, provide its homophone (3mks)
    a) Wood
    b) Red
    c) Thrown
3. Mention 4 things that would enable you to know that the audience is listening to you when reciting this poem (4mks)
    (i)
    (ii)
    (iii)
    (iv)
4. What is the economic activity of the community from which the poem is drawn? (2mks)

5. Which aspects of an oral poem are lost when the oral poem is read rather than performed (3mks)

6. If you were to recite the last lost two lines of the poem, what 3 non-verbal techniques would you employ to make it interesting? (3mks)

7. Create the rhyme scheme of this poem (3mks)

Poetry **(20mks)**

Read the following poem and answer questions that follow.

I SPEAK FOR THE BUSH, By Everet Standa

When my friend sees me
He swells and pants like a dog
Because I talk the wisdom of the bush
He says we from the bush
Do not understand the civilized ways
For we tell our women
To keep the hem of their dresses
Below the knee

We from the bush, my friend insists
Do not know how to 'enjoy'
When we come to the civilized city,
Like nuns, we stay away from night clubs
Where women belong to no men
And men belong to no women
And these civilized people
Quarrel and fight like hungry lions!

But my friend, why do men
With crippled legs, lifeless eyes,
Wooden legs, empty stomachs
Wonder about the streets
of the civilized world?

Teach me, my friend, the trick
So that my eyes may not
See those whose houses have no walls
But emptiness all around
Show me the wax you use
To seal your ears

To stop hearing the cry of the hungry.

Teach me the new wisdom
which tells me
To talk about money and not love
When they meet women.

Tell your God to convert
me to the faith of the indifferent
The faith of those
who will never listen until
They are shaken with blows

I speak for the bush
Your speak for the civilized
Will you hear me?

Questions

1. What is the message of the poem? (2mks)

2. Who is the persona in the poem? (2mks)

3. List down 2 differences between ‘1’ and ‘my friend’ (2mks)

4. Identify and explain 3 stylistic devices used in the poem (3mks)

5. What 3 problems do people face in the ‘civilized city’? (3mks)

6. What is the attitude of the persona towards the ‘civilized’? (2mks)

7. Describe the tone of this poem (2mks)

8. Paraphrase the last stanza (2mks)

9. Explain the meaning of (2mks)

i. We from the bush

ii. Where women belong to no men

iiii. And men belong to no women

Appendix IX: Students' Motivation Questionnaire (SMQ)

The purpose of this questionnaire is to find out what you think about English course. The questionnaire contains questions on teaching and learning of English.

School: _____

Gender: Male ☐ Female ☐

Admission Number_____

Type of School (check ✓ one)

(a) Girls' only ☐

(b) Boys' only ☐

(c) Mixed ☐

In this section,

1) Read the items carefully and try to understand before choosing what truly agrees with your thought.
2) Circle around the letter(s) that corresponds with how you think and feel towards English. Circle only one of the choices.
3) The choices are: SA-Strongly Agree, A – Agree, D – Disagree, SD – Strongly Disagree, U – Undecided.
4) Incase you change your mind about an answer, you may cross it neatly and circle another one.

Example: A student who strongly agrees with the following statement would answer as follows:

English is an important subject in technological advancement  SD D U A SA

NB: The above student had chosen SD but changed his/her mind and settled on SA.

In a scale of 1-5 where 5=Strongly Agree, 4 =Agree, 3=Undecided, 2=Disagree, 1= Strongly Disagree. Indicate the level of agreement on how you think and feel towards English

Statement	5	4	3	2	1
1. I have always done well in English.					
2. I aspire to study English after K.C.S.E					
3. I find it hard to work independently in English problems.					
4. My performance in English this term has made me love-learning English					
5. Learning English this term has been in itself rewarding					
6. I am likely to succeed in English because of the way we are learning it.					
7. I am sure that there is need for me to continue learning English.					
8. I expect to be able to apply English in life situations.					
9. Learning English, this term has been a big fun.					
10. I am satisfied with the way I learned English this term.					
11. I am more successful in English this term than the previous terms.					
12. English subject matter is related to my daily experiences.					
13. I expect to be successful in English tasks given by English teachers.					
14. Learning English, this term has been frustrating.					
15. I was feeling uneasy during this term's English lessons.					
16. English became one of my best subjects this term.					
17. English is relevant to my needs and goals both in school and at home.					
18. Learning English has given me opportunities for personal advancement.					
19. The hours I spent doing English this term were the ones I enjoyed more than ever.					
20. I am satisfied with my participation in this term's English activities.					
21. I often need help in English. 22. English gives me opportunities for career choices.					
23. I have always practiced solving English problems during the holidays.					
24. My performance in English this term has highly motivated me to learn more English.					
25. I am satisfied with the way English was taught this term.					

26. I would want to take an advanced course in English because of the way we have been taught.					
27. English lessons give me opportunity for group discussion.					
28. I will expect to perform well in English related subjects.					
29. My performance in English assignments, tests, modules and examinations has been satisfying.					
30. I would want to take advanced courses in English.					
31. I would like a career that require usage of English.					
32. I expect to be able to solve English problems anywhere I come across them as long as they are of my level of education.					
33. I look forward for English lessons this term.					
34. This term's work has made me expect high scores in English tests.					
35. I have always looked forward to English lessons.					
36. I am more likely to understand anything in English than last term.					
37. I have had an improved level of reasoning from one step to another as required when working English items.					
38. I have had joy studying English than last term.					
39. I find this term's activities in English lessons more meaningful.					
40. I would want my English teacher to continue teaching in the same way as he/she did this term.					

Appendix X: University Authorization Letter

KABARAK UNIVERSITY

Private Bag - 20157
KABARAK, KENYA
http://kabarak.ac.ke/institute-postgraduate-studies/

Tel: 0773 265 999
E-mail: directorpostgraduate@kabarak.ac.ke

BOARD OF POSTGRADUATE STUDIES

25th April, 2019

The Director General
National Commission for Science, Technology & Innovation (NACOSTI)
P.O. Box 30623 – 00100
NAIROBI

Dear Sir/Madam,

RE: MAKINI SONOI VITALICE- REG. NO. GDE/M/1312/09/11

The above named is a Doctor of Philosophy student at Kabarak University in the School of Education. He is carrying out research entitled ***"Effect of Cooperative Learning Approach on Students' Academic Motivation, Perception and Achievement in English in Co-Educational Public Secondary Schools in Nakuru County".*** He has defended his proposal and has been authorized to proceed with field research.

The information obtained in the course of this research will be used for academic purposes only and will be treated with utmost confidentiality.

Please provide him with a research permit to enable him to undertake his research.

Thank you.

Yours faithfully,

KABARAK UNIVERSITY
DIRECTOR
POST GRADUATE STUDIES
25 APR 2019
PRIVATE BAG - 20157, KABARAK

Dr. Betty Jeruto Tikoko
DIRECTOR, POSTGRADUATE STUDIES

Appendix XI: NACOSTI Authorization Letter

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

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/19/61212/30017**

Date: **27th May, 2019**

Vitalice Sonoi Makini
Kabarak University
Private Bag - 20157
KABARAK.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Effect of cooperative learning approach on students' academic motivation, perception and achievement in english in co-educational Public Secondary School in Nakuru County, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Nakuru County** for the period ending **23rd May, 2020.**

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

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nakuru County.

The County Director of Education
Nakuru County.

Appendix XII: NACOSTI Research Permit

THIS IS TO CERTIFY THAT:
MR. VITALICE SONOI MAKINI
of KABARAK UNIVERSITY, 17027-20100
NAKURU,has been permitted to conduct
research in *Nakuru County*

on the topic: *EFFECT OF COOPERATIVE LEARNING APPROACH ON STUDENTS' ACADEMIC MOTIVATION, PERCEPTION AND ACHIEVEMENT IN ENGLISH IN CO-EDUCATIONAL PUBLIC SECONDARY SCHOOL IN NAKURU COUNTY, KENYA*

for the period ending:
23rd May,2020

.....
Applicant's Signature

Permit No : NACOSTI/P/19/61212/30017
Date Of Issue : 27th May,2019
Fee Recieved :Ksh 2000

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

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

'ant of Research Licenses is guided by the Science, ılogy and Innovation (Research Licensing) Regulations, 2014.

)NDITIONS

License is valid for the proposed research, location and ified period.
License and any rights thereunder are non-transferable.
Licensee shall inform the County Governor before ımencement of the research.
avation, filming and collection of specimens are subject to ther necessary clearance from relevant Government Agencies.
License does not give authority to transfer research materials.
COSTI may monitor and evaluate the licensed research project.
Licensee shall submit one hard copy and upload a soft copy ıeir final report within one year of completion of the research.
COSTI reserves the right to modify the conditions of the ense including cancellation without prior notice.

onal Commission for Science, Technology and innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 24860

CONDITIONS: see back page

Appendix XIII: Authorization Letter from the Ministry of Education

MINISTRY OF EDUCATION
STATE DEPARTMENT OF EARLY LEARNING OF BASIC EDUCATION

Telegrams: "EDUCATION",
Telephone: 051-2216917
When replying please quote
Email:cdenakurucounty@gmail.com
Ref.CDE/NKU/GEN/4/1/21 VOL.VIX/91

COUNTY DIRECTOR OF EDUCATION
NAKURU COUNTY
P. O. BOX 259,
NAKURU.

30th May,2019

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION – VITALICE SONOI MAKINI
PERMIT NO. NACOSTI/P/19/61212/30017

Reference is made to letter NACOSTI/P/**19/61212/30017**
Dated 27th May, 2019

Authority is hereby granted to the above named to carry out research on "***Effect of cooperative learning approach on students' academic motivation, perception and achievement in English in co-educational Public Secondary School in Nakuru County, Kenya***" for a period ending ***23rd May, 2020***

Kindly accord him the necessary assistance.

For COUNTY DIRECTOR OF EDUCATION
NAKURU COUNTY

AKOKO OKAYO
FOR: COUNTY DIRECTOR OF EDUCATION
NAKURU

Copy to:

- Kabarak University
  Private Bag – 20157
  KABARAK

Appendix XIV: Research Authorization from the Ministry of Interior and Coordination of National Government

THE PRESIDENCY
MINISTRY OF INTERIOR AND
CO-ORDINATION OF NATIONAL GOVERNMENT

Telegram: "DISTRICTER" Nakuru
Telephone: Nakuru 051-2212515
When replying please quote

COUNTY COMMISSIONER
NAKURU COUNTY
P.O. BOX 81
NAKURU.

Ref No. CC. SR . EDU/12/1/2 VOL.IV/104

30th May, 2019

TO WHOM IT MAY CONCERN

RE:- RESEARCH AUTHORIZATION – VITALICE SONOI MAKINI

The above named student from Kabarak University has been authorized to carry out research on **effect of cooperative learning approach on students' academic motivation, perception and achievement in English in co-educational Public Secondary Schools** in Nakuru County for a period ending 23rd May, 2020.

Please accord him all the necessary support to facilitate the success of his research.

J. B. KICHWEN
FOR COUNTY COMMISSIONER
NAKURU COUNTY

Appendix XV: List of Publications

Journal of African Interdisciplinary Studies (JAIS): ISSN 2523-6725 (online)
November 2019 Vol. 3, No. 11

Citation: Makini, V.S; Barasa, F. S & Chemwei, B. (2019). Effect of cooperative learning approach on students' academic motivation in English in co-educational public secondary schools, Nakuru County, Kenya. *Journal of African Interdisciplinary Studies,* 3(11), 22 – 37.

Effect of Cooperative Learning Approach on Students' Academic Motivation in English in co-educational Public Secondary Schools, Nakuru County, Kenya

By

Vitalice Sonoi Makini [1]
Doctorate Student in Education (Curriculum & Instruction), Kabarak University.

Fred S. Barasa[2]
Vice Chancellor, Taita Taveta University.

&

Bernard Chemwei[3],
Director ODELT and Teaching Practice Coordinator, Kabarak University

Corresponding author: Cyrus Lemba - cyruslemba@gmail.com
+254725820686

Abstract
The purpose of the study was to determine the effect of cooperative learning approach (CLA) on student's academic motivation in English in public co-educational secondary schools in Nakuru, County Kenya. The study adopted quasi experimental design, based on Solomon Four- group, Non-equivalent Control Group Design. The study involved two Experimental groups, E_1 and E_2 which were taught through CLA method and two Control groups, C_1 and C_2 which were taught through the Conventional methods. The target populations were students and teachers from the four co-educational public secondary schools of Nakuru County. Nakuru County was selected due to its low academic achievement with a mean score of 3.33 in 2015, a mean score of 2.81in 2016 and a mean score of 3.00 in 2017. The study sample size was 242 Form three students from the four co-educational public secondary schools in Nakuru County. Students' Motivation Questionnaire (SMQ) was used to collect quantitative data. The study found that by teaching English subject using CLA in public co-education secondary schools in Nakuru County, the students were likely to improve with a margin of 37.0% while teaching of the subject using the conventional methods would only realize a gain of 7.5%.The study concluded that there was statistically significant effect of cooperative learning approach on students' academic motivation in English in public co-education secondary schools in Nakuru, County Kenya ($F(1,126)=737.625$, $P<0.05$). The study recommended that English teachers should use cooperative learning approach (CLA) in teaching of English. The study further recommends teachers to motivate and inspire their learners with regard to positive virtues' which enhances students' motivation to improve and have a desirous drive towards the learning.

Keywords: Kenya, Nakuru County, Cooperative Learning, Academic Motivation

Journal of Literature, Languages and Linguistics
ISSN 2422-8435 An International Peer-reviewed Journal
Vol.64, 2020

Effect of Cooperative Learning Approach on Students' Academic Achievement in English in Co-Educational Public Secondary Schools, Nakuru County, Kenya

Vitalice Sonoi Makini[1],
Doctorate Student in in Education (Curriculum & Instruction), Kabarak University.

Fred S. Barasa[2],
Professor of Education, Taita Taveta University.

Bernard Chemwei[3],
Director ODELT and Teaching Practice Coordinator, Kabarak University.

Abstract
A lot of scholarly research articles have lauded the positive significant contribution of Cooperative Learning Approach (CLA) and its effect on student's academic achievement. However none of those studies have been conducted on English subject, therefore this study investigated how the use of CLA affects students' academic achievement in English in public coeducational secondary schools in Nakuru County. The study adopted quasi experimental design, based on Solomon Four- group, Non-equivalent Control Group Design. The study involved two Experimental groups, E_1 and E_2 which were taught through CLA method and two Control groups, C_1 and C_2 which were taught through the Conventional methods. The target populations were students and teachers from the four co-educational public secondary schools of Nakuru County. The accessible population was 766 form three students in the four schools. The study sample size was 242 Form three students from the four co-educational public secondary schools in Nakuru County. The study used English Achievement Test (EAT) to collect quantitative data. Data was analyzed using both descriptive and inferential statistics using the Statistical Package for Social Sciences (SPSS version 24). Comparing the mean gain for the two groups of students', it was established that students using cooperative learning approach were 12% higher in English achievement test as compared to their peers who were taught using conventional methods. The study concluded that there was statistically significant effect of cooperative learning approach on students' achievement of English in public co-educational secondary schools in Nakuru, County Kenya ($F(1,216)=113043.974$, $p<0.05$). The study further concluded that use of cooperative learning approach improves student achievement in English compared to use conventional methods. The study recommended teachers to adopt modern constructivism approaches to teaching students especially Cooperative learning approach that is student centered.
Keywords: Cooperative Learning Approach, Academic Achievement
DOI: 10.7176/JLLL/64-07
Publication date: January 31st 2020

Introduction

Background to the study

English as a service channel for teaching in Kenyan schools is an indispensable discipline both in educational programmes and as a utility subject (Barasa, & Mutitu, 2013). The functions of English are varied, among them being; fulfilling educational, developmental, social, aesthetical aspects and cognitive development. A wide command of English knowledge and word power for different uses such as professional, economical daily transactions in the Kenyan and international world environment. In Kenya, elements of grammar and literature are integrated and taught as one subject namely, English. The components of the integrated English include; grammar items, comprehension passages, cloze test, poetry and poem appreciation, oral literature genres, and literature set books.

The poor language prowess of English by secondary school learners in the last three decades has shone the limelight on the instruction and studying of English Language. Specifically in Nakuru County where the study was based, the average mean score in English in 2017 of 3.00 out of a possible 12 points which translated to 25% was lower than the National mean score of 40.29% which was a negative drop of 15.29%. Therefore, it was against this backdrop of information that this research study sought to fill the knowledge gap and investigate on the effects of using Cooperative Learning Approach on students' academic achievement in English, in co-educational public secondary schools, in Nakuru County (KNEC, 2018).

This poor results in English subject could be due to the instructional methods. Page (2017) established that CLA activities had many functions in learning activities for instance it gave a lot of learners a chance to

Appendix XVI: Nakuru County Map