Effects of Cooperative Learning Approach on Secondary School Students’ Achievement in Kiswahili Language Comprehension in Kisii Central Sub-County, Kenya

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Abstract
This study was designed to develop and explore the instructional potential of a Cooperative Learning (CL) approach in the teaching of Kiswahili Language Comprehension. It was conducted in secondary schools in Kisii Central Sub-County, Kenya. The study used quasi experimental Solomon Four Non-equivalent Control Group Design. It involved 160 Form Two students that were drawn from four schools. Simple random sampling technique was used to select the schools and classes that participated in the study. A Kiswahili Comprehension Achievement Test (KCAT) was employed to collect data. KCAT was checked for validity and piloted for reliability. The tool yielded reliability coefficient of 0.74. The collected data were analysed both using descriptive and inferential statistics. Descriptive statistics was used to describe and summarize raw data using means, standard deviation, frequencies and percentages. The t-test, ANOVA and ANCOVA were employed for statistical tests of significance at alpha ($\alpha$) = 0.05. The findings of the study showed that the Cooperative Learning Approach significantly improved the learners’ achievement in the learning of Kiswahili Language Comprehension. It is hoped that these results may help stakeholders in the teaching and learning of Kiswahili by enhancing the teaching of Kiswahili Language Comprehension thus improve the student performance in the learning of Comprehension.

Keywords: Cooperative Learning, Secondary School, Achievement

Research Paper

Introduction
Kiswahili language in Kenya owes its origins in the coastal regions of East Africa. The language spread inland through trade and development of the railway by Arabs and Indians. Kiswahili is generally seen as a unifying language for East African region socially, politically, and commercially. It has grown in administrative and interethnic borders to claim being an all-African language and to a reasonable extent striving to be a worldwide language (Kimemia, 2001). Kimemia (2001) says that Kiswahili is not only an Eastern and Central African language but it has permeated to the rest of African countries including, Zaire, Rwanda and Burundi. In the rest of the world it is taught and used in countries such as U.S.A., Britain, and France.

Kiswahili has been enshrined in the Kenyan Constitution as one of the National and Official Languages in Kenya. The new Constitution, which was promulgated in the year 2010, in Chapter Two states:

(1) The national language of the Republic is Kiswahili.
(2) The official languages of the Republic are Kiswahili and English.
(3) The State shall—
(a) Promote and protect the diversity of language of the people of Kenya; and
(b) Promote the development and use of indigenous languages, Kenyan Sign Language, Braille and
other communication formats and technologies accessible to persons with disabilities (Kenya
Government, 2010). The development of Kiswahili in the education system has remoulded the
Western oriented Educational model into a true Kenyan model. This has taken—off since the
introduction of 8.4.4 system of education in 1985. Bogonko (1992) said that, if any education is to be
effective it must be passed through language. So there should be a definite language policy in
schools that will enable learners to acquire the language skills such as reading, writing and speaking
for them to communicate in school and society.

To achieve the goals of communication, administration, commerce and socialization, even in colonial
Kenya, the British saw the importance of Kiswahili language; thus they allowed Kiswahili to be used
as medium of instruction in elementary schools in almost all primary schools. Whiteley (1974), as
quoted in Kimemia (2001), asserts that it is injustice to deprive one of his/her own language. The
Educational commissions after independence such as the Ominde and Mackay commissions
emphasized the inclusion of the Kiswahili language in the educational curriculum. It became
 compulsory and examinable in the Kenya Certificate of Primary Education (K.C.P.E) in 1985, and
since 1986 it is a compulsory subject, examinable at the end of secondary school course under the 8-4-4 system of education. All form four candidates sat for it for the first time in the year 1989
(Bogonko, 1992).

In examinations, Kiswahili language paper examines the candidates’ knowledge and
understanding of language conventions currently in use as well as the candidate’s ability and
capacity to handle and apply such conventions in their attempt to convey meaning. The test of
comprehension is one of the sections that constitute the paper. According to the Kenya
Institute of Education (K.I.E.) Secondary School Kiswahili language syllabus, a student is
expected, at the end of the course (secondary school), to be able to understand a passage by
following its content, arguments and narrative sequence and infer information, meanings,
attitudes, intentions and present such information in a variety of ways (K.I.E., 1992). However, students get difficulties in learning the subject as evidenced by poor performances reported in examination reports (KNEC, 2002; KNEC, 2015). This shows lack of mastery of
the language. Since the year 2011 to 2014, the Kiswahili language grammar examination paper that is scored out of 80 marks had been performed below average. Question 1 (one), on
comprehension, had been quoted all along, among the questions that were having a declining
trend. In 2004, for instance, the Chief Examiner for the Kiswahili grammar paper lamented
that there was a grim shocking picture in performance in comprehension, which continued to
be performed poorly (KNEC, 2015). The poor performance may be attributed to the students’
inability to read and comprehend the subject matter. Pupils with reading problems often lack
the ability to organise materials, to sequence their work on paper and understand fully what is
required of them from printed matter (Robinson, 1993). The teaching of comprehension in
Kiswahili language is expected to equip them with this ability. But the section containing
comprehension in the Kiswahili Examination (Paper 2 as shown in Table 1) is performed
below average, for instance, since the year 2011- 2014 (KNEC, 2015). Announcing the
KCSE results for the year 2013, the minister for Education said that…the six subjects that
showed a drop in performance were Kiswahili, Home science, Art & Design, Aviation,
Technology and Germany (Bogonko, 1992).

<table>
<thead>
<tr>
<th>Table 1: Kiswahili Examination Results for the Year 2011-2014</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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The scores for Paper 2 (102/2) dropped from 43.45 in the year 2011 to 29.06 in 2012. The score is almost the same in the year 2013 which had an average of 29.92; there is a very slight improvement but still far below average. In the year 2014 it improved minimally to 32.27. The items on comprehension and summary gave the candidates difficulties. Most of the candidates lost their scores in Comprehension, Summary, and Sociolinguistics (KNEC, 2015).

In overall performance, in Kiswahili language out of 100, as shown in Table 1, the percentage mean has been far below average; in the year 2011 48.82%, in 2012 35.82%, in 2013 41.60% and 47.7% in 2014. However, it has made a significant improvement in 2014 but still has not managed to go above the average. In an increasingly competitive society, the minimum requirements for entry into tertiary institutions have gone up. Attaining higher grades at KCSE is, therefore, of utmost importance. Kisii Central Sub-county which was the focus of this study has been performing dismally in Kiswahili language. Examination analysis of the Sub-County from Kisii Central Sub-County QASO’s office confirms this worrying trend of poor performance. Table 2 shows the performance of Kiswahili in the Sub-County in four years consecutively.

Table 2: Kiswahili Performance at KCSE from the year 2011-2014 in Kisii Central Sub County

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Mean Score (%)</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td></td>
<td>43.58</td>
<td>39.91</td>
<td>40.09</td>
<td>43.91</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td>4.22</td>
<td>0.030</td>
<td>2.08</td>
<td>2.20</td>
</tr>
</tbody>
</table>


From Table 2, it is evident that there is a serious problem in the performance of Kiswahili. The appalling scenario is due to a host of factors including conventional teaching approaches used by teachers. Kimemia (2001), asserts, the approach of teaching Kiswahili requires further re-examination and re-definition. The “talk and chalk” approach and the rote-learning approach, which are currently widespread in Kenyan schools, are out of date and educationally inappropriate. The study therefore, sought to employ a Cooperative Learning (CL) approach to attempt to improve the performance in the subject. The aim of teaching comprehension in Kenyan secondary schools, is to enable students to...
understand texts by making meaning of the words and phrases then presenting the information in many ways in life. Nevertheless, it seems the goal is not being reached (KIE., 1992; KNEC, 2013). The hindrances may be the teaching approaches, (Robinson, 1993), inadequate instructional resources (KIE, 1992) or inability of the students to read and comprehend. However, a specific approach had not been stipulated which could rectify the situation. Thus by employing the Cooperative Learning Approach, the researchers in this study hope to improve the situation.

Cooperative Learning is a teaching and learning approach that requires active involvement of students through small-group interaction (Robinson, 1993). Students tutor each other on the task given. The duty of the teacher is to guide and coach them on how to form the groups and how to study. In the event of tutoring themselves, the low-achieving students can benefit from the high-achieving students. The high-achievers tutor low-achievers and in the process the high-achievers gain academically because serving, as a tutor requires thinking more deeply about the relationships and meanings of the subject under study. So everybody benefits (Arends, 1994).

Arends (1994), reviewed the studies that had been done between the years 1972 and 1986, investigating the effects of cooperative learning on achievement. The studies were done in United States, Israel, Nigeria and Germany on spelling, reading and writing, geography and mathematics. Out of the 45 studies, 37 of them showed that cooperative learning classes significantly out-performed control group classes in academic achievement. Eight studies found no differences. None of the studies showed negative effects of cooperative learning. Thus, the researchers hope that by employing (CL) in the teaching of Kiswahili language comprehension, the students’ achievement in the subject will be improved.

Statement of the Problem
Candidates get difficulties in attempting the section on comprehension in the Kenya Certificate of Secondary Education (K.C.S.E) Kiswahili language examinations. The section is performed below average as evidenced in the KNEC reports (KNEC, 2015). This problem is probably caused by conventional teaching approaches used by teachers (Robinson, 1993). The CL approach may help address this problem but its effectiveness in enhancing learning in Kiswahili language comprehension has not been determined in Kenya. As such, the researchers found it useful to develop a cooperative learning CL approach and established its effect on students’ attitudes towards the subject and their achievement in it.

Objective
The following objective guided the study:
To determine whether there is any significant difference in students’ achievement in the learning of Kiswahili Language Comprehension between those exposed to the CL approach and those exposed to the Conventional Teaching Approaches.

Hypothesis
The following null hypothesis was statistically tested:
There is no statistically significant difference in students’ achievement in the learning of Kiswahili Language Comprehension between those exposed to the CL approach and those exposed to the conventional teaching approaches.

Conceptual Framework
Figure 1 shows the Conceptual Framework for determining the effect of using CL approach on students’ achievement in Kiswahili language comprehension.
School category and facilities plus the teachers’ training and experience in the school determined the approaches teachers used in teaching Kiswahili comprehension. The approaches used then influenced the student’s achievement in the subject. To control for the extraneous variables the researchers involved trained teachers with similar experience. They used Sub-County schools with almost similar characteristics in terms of facilities.

**Research Design**

The study used the Solomon Four Non-equivalent Control Group Research Design. The design was considered appropriate because the classes which were involved were intact and could not be reconstituted for research purposes (Borg & Gall, 2007). The design also provides adequate control of variables that may affect the validity of the study. It involves a random assignment of intact classes of subjects to four groups, two groups being experimental and the other two as controls. Figure 2 illustrates the assignment of classes.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Treatment</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>O₁</td>
<td>X</td>
<td>O₂</td>
</tr>
<tr>
<td>II</td>
<td>O₃</td>
<td>___</td>
<td>O₄</td>
</tr>
<tr>
<td>III</td>
<td>___</td>
<td>X</td>
<td>O₅</td>
</tr>
<tr>
<td>IV</td>
<td>___</td>
<td>___</td>
<td>O₆</td>
</tr>
</tbody>
</table>

---

**Figure 2: Solomon Four Non Equivalent Control Group Design**

Where:

O₁ and O₃ are pretests,
O₂, O₄, O₅ and O₆ posttests,
X is the treatment
--- Groups are intact
___ no treatment given

The design has four groups of subjects; Group I and III are the Experimental Groups while Groups II and IV form the Control Group. Only Groups I and II were subjected to pretests (O₁ and O₃), but at the end of the course all the four groups were subjected to the posttests.
Sampling Procedure and Sample Size

The study used the list of Sub-County secondary schools in the QASO’s office as the sample frame. The researcher employed simple random sampling technique to select four schools that were involved in the study. One Form Two class was chosen from each of the participating schools. In situations where a school had more than one stream, simple random sampling was applied to select a class. Coolican (1994) recommended at least 40 subjects per treatment class. The sample sizes of the four groups I, II, III and IV which took part in the study is summarised in Table 2.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>40</td>
</tr>
<tr>
<td>Group II</td>
<td>42</td>
</tr>
<tr>
<td>Group III</td>
<td>43</td>
</tr>
<tr>
<td>Group IV</td>
<td>42</td>
</tr>
</tbody>
</table>

Instrumentation

Kiswahili Comprehension Achievement Test (KCAT) was used to collect data. The KCAT consisted of 12 structured items with a maximum score of 20 points. The instrument was checked for content and face validity by a team of 5 experts from the department of Curriculum, Instruction and Educational Management of Egerton University. Content validity ensures that the subject area is adequately covered, whereas, face validity ensures that the tool measures what is supposed to measure (Borg & Gall, 2007). Piloting was done in order to determine the reliability of the instrument; the objective of piloting is to check the items in a data collection tool and clear any ambiguities in it before it is used during a study. It was done using a class from a school in the Sub-County which would not take part in the actual study. The reliability of the KCAT was established using Cronbach’s alpha coefficient.

The Cronbach’s Coefficient alpha (α) formula:

\[
\alpha = \frac{n}{n-1} \times \frac{V_{t}-\sum V_{i}}{V_{t}}
\]

\(n\) = number of items

\(V_{t}\) = variance of the whole test (standard deviation squared)

\(\sum V_{i}\) = sum the variance for all n items

The method is recommended when the instrument is administered once and the items in it are the closed-ended Likert type (Mugenda and Mugenda, 1999). The KCAT yielded reliability coefficient of 0.74 which was above the recommended 0.7 threshold (Fraenkel and Wallen, 2000; Mugenda and Mugenda 1999). Therefore the instrument was reliable for use.

Data Collection

The researchers got an introductory letter from Egerton University and then sought a research permit from the National Council of Science and Technology. Once the permit was granted those who participated in the study were formally contacted through their respective school heads. He then explained to the respondents the purpose of the study and sought their cooperation. The Kiswahili
teachers from experimental group schools were given a week orientation course on the CL approach. The Kiswahili Comprehension Achievement Test (KCAT) was administered to students in Group I and II at the beginning of the course for purposes of ascertaining their entry level and homogeneity. All the four groups were then exposed to a series of 16 lessons in comprehension. Groups I and III were taught using the CL approach, while Group II and IV were taught using conventional approaches. At the end of the course all the four groups were given KCAT posttest. The pretest and post test data were collected and organised for analysis.

Data Analysis

The raw data were checked for errors and corrections made where necessary. There were then coded and keyed into the computer and analyzed with the aid of the Statistical Package for Social Sciences (SPSS). Data was described and summarized using frequencies, percentages, means and standard deviation. The hypothesis was tested at 0.05 level using the ANOVA and ANCOVA. A summary of the data analysis procedure is given in Table 4.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>Statistical Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is no statistically significant difference in students’ achievement in Kiswahili Language Comprehension between those exposed to CL approach and those exposed to conventional teaching approach.</td>
<td>Learning approach</td>
<td>KCAT Mean scores</td>
<td>ANOVA and ANCOVA</td>
</tr>
<tr>
<td></td>
<td>• CL approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Conventional teaching approaches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results and Discussion

Groups I and II sat for pretest before teaching started. Table 5 shows the t-test results.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>KCAT</td>
<td>Group I</td>
<td>40</td>
<td>7.03</td>
<td>3.14</td>
<td>80</td>
<td>1.29</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>Group II</td>
<td>42</td>
<td>7.98</td>
<td>3.63</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results in Table 5 showed that Group I has a mean score of 7.03 on KCAT while the mean of Group II was 7.98. The difference between the means of the two groups was not statistically significant at the 0.05 level, t(80) = 1.29, p = 0.951. This meant that the two groups were homogenous at the point of entry in terms of their achievement as measured by KCAT. The groups were considered suitable for the study as they were drawn from a stable population with comparable characteristics with respect to KCAT. The results showed that before the start of the experiment the experimental groups I and II were homogenous in terms of achievement, thus, after the administration
of the experiment any change in the results would be attributed to the treatment or lack of treatment given.

Effect of CL on Students Achievement in Kiswahili Language Comprehension
The effect of CL on the students’ achievement in Kiswahili language comprehension was determined by analysing the KCAT post-test mean scores and the gain of the groups that participated in the study. The post-test analysis involved all the four groups namely; I, II, III and IV while the gain analysis involved groups I and II that were exposed to both the pre-test and post-test. The gain (referred to as paired difference) gives an indication of the relative effects of the treatment.

Comparison of Students’ Posttest Mean Scores on KCAT
The hypothesis of the study sought to establish whether there were significant differences in achievement between students taught using CL and conventional approaches. The test of difference was conducted using the KCAT posttest mean scores of the four groups: I, II, III and IV that participated in the study. The KCAT posttest means scores and the standard deviations of the four groups are summarized in Table 6.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean max = 20</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>40</td>
<td>12.95</td>
<td>2.15</td>
</tr>
<tr>
<td>Group II</td>
<td>42</td>
<td>9.79</td>
<td>2.10</td>
</tr>
<tr>
<td>Group III</td>
<td>43</td>
<td>11.09</td>
<td>2.00</td>
</tr>
<tr>
<td>Group IV</td>
<td>42</td>
<td>9.04</td>
<td>2.24</td>
</tr>
</tbody>
</table>

Data in Table 6 showed that the posttest mean scores of the experimental groups I (M = 12.95, SD = 2.15) and III (M = 11.09, SD = 2.10) were higher than those of the control groups II (M = 9.75, SD = 2.00) and IV (M = 9.04, SD = 2.24). The results in the table however did not reveal whether the differences among the groups mean scores were significantly different. It was therefore necessary to conduct the ANOVA test to check whether mean scores among the 4 groups were significantly different at the 0.05 level.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>369.615</td>
<td>3</td>
<td>123.205</td>
<td>30.251</td>
<td>0.000*</td>
</tr>
<tr>
<td>Within groups</td>
<td>672.000</td>
<td>163</td>
<td>4.073</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1041.615</td>
<td>166</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at the 0.05 level

The results of the one way analysis of variance in Table 7 revealed that the difference in the posttest mean scores of the four groups I, II, III and IV were significant at the 0.05 level in favour of the experimental groups, $F(3,163) = 30.251, \ p < 0.05$. The results did not however reveal where the differences were. This necessitated the Post Hoc (multiple comparisons) tests. The Least Significant Difference (LSD) Post Hoc test was used to reveal where the differences were between paired groups. The procedure was chosen because it is recommended in cases where the number of groups to be compared is small (Moore & Mc Cable, 1989). In this case the groups were four.
The results in Table 8 showed that there were significant differences between the mean scores of the following paired groups; I and II (p < 0.05), I and III (p < 0.05), I and IV (p < 0.05), GII and GIII (p < 0.05), and III and IV (p < 0.05). However, the difference between the mean score of Group II was not significantly different from that of group IV (p = 0.09). These results show that students who were exposed to the CL approach performed better in the KCAT than those who were taught using the conventional teaching approach. The analysis of KCAT post mean scores using ANOVA did not take into consideration initial differences among the four groups before the commencement of the study. This implies that the differences among the groups observed during the ANOVA test could have been due to differences among the groups at the point of entry. There was necessity to conduct further test using the ANCOVA. According to Field (2012), ANCOVA uses a covariate to level out the initial differences in the mean scores of sub-groups before testing for differences. The KCPE mean scores were used as the covariate during the ANCOVA test. The adjusted KCAT posttest means are summarized in table 9.

Data in Table 9 showed that the adjusted mean scores of groups that were exposed to treatment I (M = 13.07 and III (M = 11.05) were higher than those of their counterparts in groups II (M = 9.71 and IV (9.06) who were taught using the conventional approach. It should also be noted that the combined mean score of the experimental (I and II) groups was higher than that of the control groups (II and IV) combined. The results of test of differences using ANCOVA is given in Table 10.

The results of the ANCOVA test in Table 10 showed that the differences among the KCAT posttest mean scores of the four groups I, II, III and IV were significant at the 0.05 level in favour of the experimental groups I and II, F(3, 163= 29.946, p < 0.05. Further tests using the Post Hoc comparison was done to establish where the differences were.
Table 11: ANCOVA Pairwise Comparison of KCAT Posttest Mean Scores

<table>
<thead>
<tr>
<th>Paired Group</th>
<th>Mean Difference</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I vs Group II</td>
<td>3.36</td>
<td>0.000*</td>
</tr>
<tr>
<td>Group I vs Group III</td>
<td>2.01</td>
<td>0.000*</td>
</tr>
<tr>
<td>Group I vs Group IV</td>
<td>4.01</td>
<td>0.000*</td>
</tr>
<tr>
<td>Group II vs Group III</td>
<td>-1.34</td>
<td>0.003*</td>
</tr>
<tr>
<td>Group II vs Group IV</td>
<td>0.65</td>
<td>0.154</td>
</tr>
<tr>
<td>Group III vs Group IV</td>
<td>1.99</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level

The results of the pair wise comparisons on KCAT posttest scores in Table 11 indicated that there were significant differences between the following paired groups; I and II (p < 0.05), I and III (p < 0.05), I and IV (p < 0.05), II and III (p = 0.003), and GIII and GIV (p < 0.05). The difference between the mean score of Group II was not significantly different from that of group IV (p = 0.154). The posttest analysis using both the ANOVA and ANCOVA revealed that there were significant differences among the KCAT posttest mean scores of groups I, II, III and IV. Therefore the hypothesis is rejected.

Comparison of Students Mean Gain on KCAT by Learning Approach

The results on the entry behavior of respondents revealed that before the commencement of the Kiswahili comprehension course, the students in Group I (experimental) and II (control) were similar with respect to KCAT. In order to establish any gains made by students after the course, the difference between the pretest and posttest mean scores of the groups were computed. The magnitude of gain (referred to as paired difference) gives an indication of the relative effects the treatment had on the two groups. The mean gains of the two groups are given in Table 12.

Table 12: Students' KCAT Pretest and Posttest Mean Scores, Standard Deviations and Mean Gains by Learning Approach

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group I N = 40</th>
<th>Group II N = 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>7.03</td>
<td>7.98</td>
</tr>
<tr>
<td>SD</td>
<td>3.14</td>
<td>3.63</td>
</tr>
<tr>
<td>Post-test</td>
<td>12.95</td>
<td>9.79</td>
</tr>
<tr>
<td>SD</td>
<td>2.15</td>
<td>2.10</td>
</tr>
<tr>
<td>Mean Gain</td>
<td>5.92</td>
<td>1.81</td>
</tr>
</tbody>
</table>

The results in Table 12 revealed that the pretest mean score of Group I (M = 7.03, SD = 3.14) was similar to that (M = 7.98, SD = 3.63) of Group II. However, after being taught the Kiswahili Language Comprehension, students exposed to the treatment (group I) improved remarkably. They obtained a higher KCAT posttest mean score (M = 12.95, SD = 2.62) than their counterparts in Group II (M = 9.79, SD = 2.71). That is a mean gain and difference of 5.92 and 1.81 respectively. The results in Table 12 however do not show whether the difference in the mean gain of Group I is significantly different from that of Group II. It was therefore necessary to conduct the t-test to determine whether the difference between the two mean gains were statistically significant at 0.05 level.

Table 13: Comparison of KCAT Mean Gain of Groups I and II

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Gain</th>
<th>Df</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>40</td>
<td>5.92</td>
<td>80</td>
<td>5.95</td>
<td>0.000*</td>
</tr>
<tr>
<td>Group II</td>
<td>42</td>
<td>1.81</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at 0.05
The results in Table 13 revealed that the mean gain of Group I (M = 5.92) was higher than that of Group II (M = 1.81). The results also revealed that the difference between the mean gains of the two groups were statistically significant at the 0.05 level in favour of Group I, t(80) = 5.95, p < 0.05. This means that the improvement in achievement of students exposed to CLA (Group I) was greater than that of students taught using the traditional teaching approach (Group II). The significant improvement was thus attributed to the effects of the treatment.

**Discussion of Results**

**The Effect of CLA on the Students’ Achievement in Kiswahili Language Comprehension**

The results on the entry behavior of respondents showed that the students in the experimental group I and control group II were comparable as measured by the KCAT pretest. However after the Kiswahili Language Comprehension course, the posttest analysis showed that there were significant differences among the mean scores of groups I, II, III and IV in favour of the experimental groups I and III. The results on the mean gain also revealed a significant difference between the mean gain of experimental group I and control group in favour of the experimental group. The posttest analysis showed that incorporation of CLA enhanced students’ achievement while the gain analysis revealed a significant improvement in the posttest as compared to the pretest. These findings agree with those of Wachanga (2002) who found out that cooperative learning had positive effects on pupils’ performance in primary school science.

These results are also consistent with the results of a study done in Nebraska, USA which showed that cooperative learning improves achievement in mathematics. The enhanced students’ performance in Kiswahili Language comprehension could be due to the fact that CLA provided a shared cognitive set among the students. When students discuss examples and viewpoints, they are able to grasp what their peers think and understand the issue better. CLA also provide students with opportunities to learn among themselves. When peer interaction was incorporated in Kiswahili language comprehension, the students had the opportunity to generate ideas, understand sentences and help each other. Other advantages of Cooperative learning approach is that it offers learners active learning experiences, equal access to learning and a more supportive social environment (Killen, 2007). Yamarik (2007) identified three possible reasons why cooperative learning groups performed better on exams. First, cooperative learning raised student-instructor interaction. Students felt more comfortable asking questions as a group than individually. Second, cooperative learning increased the group’s ability to study for the exams. Third, the novelty of working in small groups sparked greater interest in the subject under study because when students strategize together and discover various ways to solve a problem, they developed a better understanding of the concepts.

The students improved in achievement in Kiswahili language comprehension because they were grouped in reading. In group reading one child reads aloud as the others listen and follows the text. A weaker learner can be helped by the more able in pronunciation and comprehension. You can monitor the process to ensure that the groups are well matched and getting along well. The tutor pauses to give the tutee time to think, prompting, by way of giving clues, and praising to encourage the tutee Ministry of Education (MOE), 2001). According to MOE, when children work in pairs, they think, pair and share on a task; it encourages communication and helps them to develop their thinking.

**Summary of the Findings**

Prior to the testing of the hypothesis the entry behaviour of the respondents on the dependant measurable KCAT was analysed. The entry behaviour analysis and hypothesis test results were:

a) Differences in the KCAT pretest mean score of Group I was not significantly different from that of Group II.

b) The Differences among the KCAT posttest mean scores of the Four Groups I, II, III and IV were significant at the 0.05 level in favour of the experimental groups I and III.
c) The difference between the mean gain of Group I and Group II was significantly different at the 0.05 level in favour of Group I.

Conclusion
This study sought to establish the effect of Cooperative Learning Teaching Approach on secondary school students’ achievement in Kiswahili language comprehension. It used the Solomon’s Four Non-Equivalent Controlled Group Design. The reason for this was the involvement of intact secondary school classes. The findings of the study lead to the conclusion that CLA enhances students’ achievement in Kiswahili Language Comprehension more than Conventional Teaching Approach.

Recommendations
The results of the study revealed that cooperative learning approach to the teaching of Kiswahili Language Comprehension resulted in higher students’ achievement. On the strength of the findings and conclusions the following recommendations were made.

a) Teachers be equipped with CLA skills and this should be done through in-service training at Sub-County, County and national levels.

b) Teachers should adopt the cooperative learning approach so as to provide students with the opportunity to enjoy the benefits associated with the approach.

c) The benefits of small group cooperative learning such as interacting with peers and accepting the views of others should be used to enhance the development of students’ social abilities.

Declaration of Conflicting Interests
The Author(s) Declared No Potential Conflicts of Interest with Respect to the Research, Authorship, and/or Publication of this Article.

References


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**Aswan Buliba** is an Associate Professor of Kiswahilli with a long experience in university teaching. Currently he is teaching at Laikipia University in Kenya where he is also serving as the Director of Postgraduate Studies. He is widely published in the area of teaching and learning of languages.

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