Effects of Computer-Based Cooperative Learning Method on Students' Attitudes Towards English Grammar in Secondary Schools in Njoro Sub-County, Kenya

Rose Akuka Ongalo[1], Patricia Wanjiku Wambugu[2], Zephania Orato Anditi[3]

Department of Curriculum, Instruction and Educational Management,
Egerton University, KENYA.

[2]patriwa2010@gmail.com

ABSTRACT

This study was conducted to find out the effects of Computer-Based Cooperative Learning Method (CBCLM) on students' Attitude in English Grammar. Solomon Four Non-Equivqlent Control Group Design under Quasi experimental research was employed for the study. The population comprised of all form two students in co-educational schools in Njoro Sub-County. A sample of 176 students was selected through purposive sampling technique. Two groups were randomly assigned to experimental and control groups respectively. Computer-Based Cooperative Learning Module was used by the teachers in the experimental group while those in the control group used the Conventional Teaching Methods. Student Attitude Questionnaire (SAQ) was used to collect data. The instrument was validated and pilot tested. SAQ had a reliability coeffcient of 0.96. Data was analysed using ANOVA. The findings of the study indicate that there was a significant statistical difference in students' attitude towards English Grammar when CBCLM was used. The researchers recommended the use of CBCLM to improve students' attitude towards English Grammar.

Keywsords: Computer-based cooperative learning, conventional teaching methods, students' attitudes, english grammar

INTRODUCTION

English Language is essential for meaningful communication and effective reading of comprehension in schools. English language is also the official language in Kenya and is also used for communication in schools and offices. Performance of students in English Language and especially English Grammar, in Kenya Certificate of Secondary Education (KCSE) has been poor over the years. Students' attitude towards English grammar has also created a hindrance to grasp the conceptual knowledge of English language and poor attitude towards the subject for seconday school learners (Akuka 2013; Shah, Gill & Mahmood 2013; Balcaza, 2000; Kamau, 2002; Kiptanui & Mbugua, 2009). Lack of proper syllabus coverage, inadequate teaching materials, and teaching methods among others have been attributed to the negative students' attitude towads learning of English grammar. There is therefore concern on how to improve students' attitude towards English grammar to enhance the learning of English language in secondary schools(Alqadi & Alqadi , 2013).

The attitude a learner has towards a subject and the instructor as well is very important. Alot of studies have been carried out in order to confirm this. Akcay (2006) researched on the effect of computer- based learning on students' attitudes and achievement towards analytical chemistry and found out that there was a significant difference between control and experimental groups. The attitudes of those students' in the experimental groups were higher than those in control groups. This in turn made them to achieve better than those students that

had negative attitude towards Computer-based learning. in his descriptive study on students' attitude towards computers and communicating in an elementary science with Students and also pre- service teachers had a positive attitude towards learning when computers are in-corporated in a learning situation (Kilic,2001; Omosehin, (2003).).

Computer-Based Cooperative Learning Method (CBCLM) is learning approach which involves active learning and can enhance motivation, improve classroom performance and overall attitudes toward learning. CBCLM involves small teams, where each student of different levels of ability use a variety of learning activities to improve their understanding of the subject as they use of computers as a key component of the educational environment (Johnson et al., 1991). It is a source of motivation to children working together on a problem and therefore yields improved positive attitudes when compared to other teaching methods. CBCLM has been used in different subjects by different people and has proved fruitful in enhancing students'attitudes towards learning (Johnson & Johnson 2000; Slavin, 1995; Zielinski & Swift, 1997; Tielemans & Collins, 1999; Kozma, 2008). CBCLM gives opportunities to both students and teachers to teach by their speed and combine active learning with computer technology and cooperative learning groups (Collette & Collette, 1989; Kelly, 2000; Chang, 2002; Kiboss, 1997;Wambugu, Changeiywo&Ndiritu (2013).

PURPOSE OF THE STUDY

The purpose of the study was to determine the effects of Computer - Based Cooperative Learning Method on students' attitude towards English Grammar in secondary schools in Njoro Sub County in Nakuru County.

OBJECTIVE OF THE STUDY

The study was guided by the following objective:

To determine the effect of CBCLM on students attitudes towards English Grammar in Secondary schools in Njoro Sub County.

RESEARCH HYPOTHESIS

H_O1: There is no statistically significant difference in students' attitudes towards English Grammar between students taught using CBCLM and those taught using conventional teaching methods.

The Conceptual Framework for determining the effects of Computer-based Cooperative Learning on Students' attitude in English Grammar comprised of the dependent variable which was students'attitude which can be inturn influenced by teachers experience, teachers knowledge and use of computers. These were controlled by using trained english teachers who had computer use knowledge. Learner characteristics were controlled by invliving form two students in co-educationational schools.

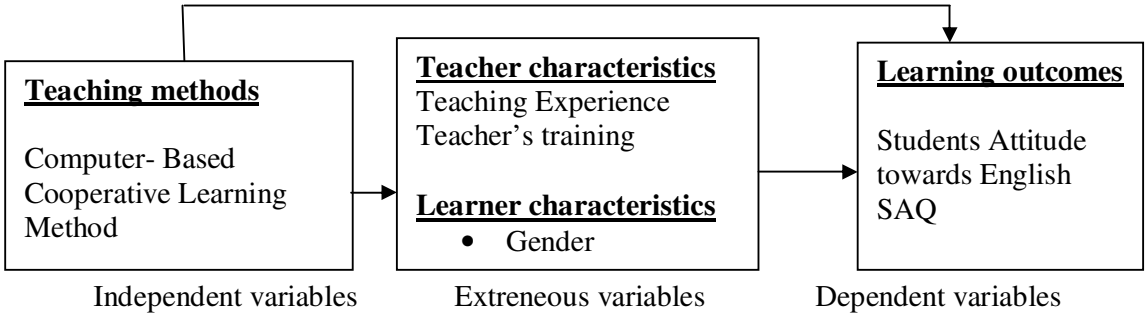

Figure 1 : Conceptual Framework for Computer-Based Cooperative Learning Method

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RESEARCH METHODOLOGY

The research design used in this study was quasi-experimental. The researchers used Solomon Four Non-equivalent Control Group Design. This design was chosen because the unit of sampling, a class, was already constituted and, therefore, it was unethical to re-constitute one randomly. The design involved a random assignment of intact classes tofour groups.

Group E1 Received the pre-test, the treatment X and the

Post-test.

Group C1 Received a Pre-test followed by the control

condition and a Post-test.

Group E2 Received the treatment X and a Post-test

Group C2 Received the Post-test only.

Group C1 and Group C2 were taught using conventional

methods.

Instrumentation

The students' attitude was tested using a questionnaire (SAQ) comprised twenty questions was used to find out the students' attitude towards CBCLM before and after treatment. Each item in the questionnaire was developed to address research the hypothesis of study. The instrument was adopted from Kiboss (1997) and modified to make them suitable for the study. It consisted of 20 questions based on the five point Likert scale. The instrument was validated and pilot tested. SAQ had a reliability coeffcient of 0.96.

Computer Based Cooperative Learning module was a package organized for use in instruction of learners in learning English grammar**.** The implementation of CBCL module was considered the final and crucial stage of computer based learning evaluation process in order to establish its effectiveness. The students were presented with manuals which contained the prepositions, content of the module and the procedures that were to be followed. Each member of the group was assigned a role to play. The students were informed of the basic requirements like participation of everyone and helping each other during the task. The students were responsible for asking questions and helping each other as they worked together in groups. The sitting arrangement of the classroom was changed to suit the study. The learners sat in groups in order to enhance personal interaction.

Data Collection And Analysis

Pre-tests were administered to groups 1 and group 2 before the treatment condition. After treatment condition, post-test was administered to all groups. The researchers then scored SAQ and generated quantitative data which was analyzed. Data was analyzed using One-way ANOVA.

RESULTS AND DISCUSSION

Pre-test Results

At the beginning of this study the assumption was that the groups to be used in the study were similar. The researchers, therefore, sought to assess the homogeneity of the groups before the application of treatment as recommended by Gall, Borg and Gall (2003). A pre-test was

administered on two groups. The results in Table 1 show the t-test for pre-test mean scores of SAQ.

Table1:Independent Samples t-test of the Pre-test Score on SAQ

Variable	*Group*	*df*	*t- value*	*p - value*	*Significant Level*
SAQ	1	63	1. 964	0.054	NS
	2				

t-Critical= 1.669, P < 0.05

The results of Table 1 revealed that there was no statistically significant difference in the pre-test scores t(63)= 1.964, p>0.05.This means that groups used in the study for SAQ exhibited comparable attitudes towards English grammar.

Effects of CBCLM on Student's Attitudes towards English Grammar

The hypothesis sought to find out whether there was statistically significant difference in attitudes towards English Grammar among students' taught with CBCLM and those taught using Conventional teaching methods. Table 2 shows SAQ mean scores obtained from the four groups.

Table 2: SAQ Post-test means scores

GROUP	*N*	*STD DEVIATION*	
C_1	33	2.43	0.40
C_2	32	4.08	0.20
C_3	39	2.60	0.34
C_4	34	3.69	0.05

The results shown in Table 2 indicates that experimental groups E_1 and E_2 (4.08 and 3.69) achieved higher meanscores than control groups C_1 and C_2 (2.43 and 3.69) respectively. This shows that CBCLM had an effect on the learners' attitudes. However, the results did not show whether the difference was statiscally significant.To establish whether the differences between the groups were statistically significant. Analysis of variance was done and the results are shown in Table 3.

Table 3: ANOVA of the Post-test SAQ Mean Scores by Learning Method

SCALE	*GROUP*	*SS*	*df*	*Critical t*	*MS*	*F*	*P*
SAQ	Between groups	66.777	3	2.353	22.259	213.901	0.000*
	Within groups	13.944	134	1.650			

* Mean difference is significant at 0.05

The results indicate that there was a statistically significant difference between the mean scores since the p - value F (3,134) = 213.901, p = 0.000 is less than 0.05. A post hoc of the Least Significant Difference (LSD) was done to establish where the differences were. The results are shown in Table 4.

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Table4: Post Hoc scores of SAQ

GROUPS	*MEAN DIFFERENCE*	*SIGNIFICANCE*
C_1 v/s C_2	0.17	0.198
C_1v/s E_1	1.65	0.000*
C_1 v/s E_2	1.26	0.000*
C_2v/s E_1	1.48	0.000*
C_2 v/s E_2	1.10	0.000*
E_2 v/s E_1	-0.19	0.199

* Mean difference is significant at 0.05

The results of Table 4 shows that there was no statistically significant difference in attitude in C_1 and C_2.and E_1 and E_2. On the other hand, there was statistically significant difference in the following groups: C_1 and E_1 C_1 and E_2 C_2 and E_1 C_2 and E_2.

The difference between the experimental and control groups were statistically significant hence the null hypothesis was rejected. This implies that there was a statistically significant difference in attitudes towards English Grammar between students taught with CBCLM and those taught using conventional teaching methods.

DISCUSSIONS

The findings of this study have shown that CBLM enhances learners' Attitude to learn English grammar. The use of CBLM in this study, therefore, enabled learners to be active cognitively in continous group involvement and hence improved their attitude toards English grammar.

A study by Huber and Schofield (1998); (Sanger and Greebowe, 2000); Akcay*et al*. (2003) revealed that the use of Computers in the classroom set up makes the learning environment more friendly to the learners therefore students generally have positive attitude towards learning. In this study the interaction of students with computers, in thecomputer based cooperative learning english module on prepositions helped them changed their attitudes. The module helped them break the monotony of the use of conventional teaching methods thus enhancing students' attitude towards English Grammar. The primary benefit of cooperative learning in CBCLM is that it enhances students' attitude by actively involving students in designing and completing class procedures and course content, this is in agreement with Johnson & Johnson, (2000). The use of cooperative learning and continued interaction with computers in CBCLM proved interesting and stimulating since the learners were actively involved in their groups as the module highlighted the types of prepositions, their meanings and how they were used correctly in english grammar. This may have been the reason as to why those who were exposed to CBCLM had improved SAQ mean score in English Grammar than those taught with conventional teaching methods.

CONCLUSION

ANOVA results indicated that a significant difference was identified between group means of students who were taught using CBCLM and those taught using conventional teaching

methods. Thus CBCLM enhance students' attitudes to learn english grammar compared to conventional teaching methods.

RECOMMENDATIONS

The findings of this study have indicated that the use of CBCLM results in higher students' attitude in English grammar. Thus the strategy should be incorporated into the teaching of English language at secondary school level. This in turn would improve students' attitude to learn English lnguage. Curriculum developers in their efforts to improve the effectiveness teachers of English should encourage the use of CBCLM. Teacher training institutions should also make the use of CBCLM part of the English teacher education curriculum.

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school, secondary school, and university students) and studies comparing cooperative learning methods for mathematics achievement and on attitudes towards mathematics to traditional methods (v) Studies comparing cooperative learning methods to traditional methods (but not multiple intelligence based cooperative learning methods or computer assisted cooperative learning methods).Â The Efficacy of Cooperative Learning on Attitude 7 studies focusing on the effect of cooperative learning on attitudes towards mathematics were included in the analysis. According to the random effects model, the upper limit of the confidence interval was found to be 0.52 and the lower limit was -0.20. The effect size value was ES = 0.6. English proficiency, the computer - based students. scored significantly higher on open-ended tests. covering the structures in question rather than the. teacher-directed instruction. The results indicate that. computer-based instruction can be an effective method. of teaching L2 grammar. [1] Conducted a study to. explore the effect of a CALL program on students'. writing ability in English by teaching the program. cooperatively and collectively. KEY TERMS Drug abuse; Kenya; secondary schools; students; drug-related problems; addressing drug abuse; prevention measures; need for responsibility; student participation; risk factors; protective factors; academic performance; youth; Modified Social Stress Model. iii. DECLARATION. I declare that DRUG ABUSE IN SECONDARY SCHOOLS IN KENYA: DEVELOPING A PROGRAMME FOR PREVENTION AND INTERVENTION is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. â€¦.. Signature RW Maithya Student No. 3512/194/7. Changing students' negative attitudes towards learning is a process that involves determining the factors driving the attitude and using this information to bring about change. Features How do educators determine student attitudes on learning?Â Effects Student attitudes on learning, good or bad, affect their outlook toward learning throughout life. Their attitude towards learning affected not only their amount of education but their desire for education.Â In contrast, the Cooperative Learning method involves teams of students working together to complete projects. However, while conducive to the over-achieving and take-charge student, it can intimidate the shy, introverted student. Do most students have negative attitude towards mathematics? Can studentsâ€™ attitude toward the study of mathematics be influenced by teachersâ€™ method of teaching. Can studentsâ€™ attitude towards mathematics be influenced by their parents? Can attitude of students towards mathematics be influenced by their friends? Do students who do badly in mathematics during examinations have negative attitude towards the study of mathematics?Â This study is limited to only S.S.S I and S.S.S II students in five selected secondary schools in Benin City. In administration of questionnaire, the students and only qualified mathematics teachers in the secondary schools were interviewed. Get the complete project Â». Instant Share On Social Media