UNMASKING THE EFFECTIVENESS OF COMPUTER ASSISTED INSTRUCTION IN THE TEACHING AND LEARNING OF SOCIAL STUDIES IN CROSS RIVER STATE COLLEGE OF EDUCATION AKAMKPA, CROSS RIVER STATE, NIGERIA

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ABSTRACT: *In this study, comparative analysis of Computer assisted instruction and traditional (lecture) method of teaching and learning Social Studies in College of Education Akamkpa, Cross River State was investigated. The objective of the study was to determine if there is a significant difference in the effects of the treatment and control groups as measured by the pretest and posttest. The population of the study was a class of Sixty (60) College students in Social Studies taught with the use of CAI and another class of Sixty (60) students taught with the use of the traditional (lecture) method. There was no sampling since the entire population was used. The research method used was quasi –experimental, non-equivalent control group design. The statistical tool was the t-test. The researchers made used of the CD-ROM prepared to serve as the teaching medium for the experimental group. A 10-item questionnaire was also used to seek the opinion of the students on the effectiveness of both teaching methods (CAI and traditional). The findings of the study revealed that the achievement posttest of the treatment group has higher estimated marginal values than the control group. The result of the study also showed that the combination of CAI and collaborative work improves teaching and learning. Despite the limitation of the study being conducted in one classroom, with one teacher and Sixty (60) students, the result cannot be generalized to other schools. Conclusively, it was recommended among others that teachers should attempt to be ICT complaint to enhance their chances of using CAI innovative in teaching Social Studies*

KEYWORDS: Computer Assisted Instruction, Lecture Method, Social Studies, Academic Achievement

INTRODUCTION

Social Studies is part and parcel of human life. Teaching and learning Social Studies not only helps in understanding other Social Sciences, but trains one's mind to think logically and rationally. It develops problem-solving abilities in day to day life and promoting proper understanding of man and his environment. Social Studies according to Nwaubani (2010) is a value- laden subject. In the views of Mezieobi and Onyeanusi (2012) it is a course of study which imbibes in man the relevant knowledge, values, skills and attitudes required to function effectively in the society. The Federal Government of Nigeria in recognition of the importance of education in the attainment of national development goals, design Social Studies to among other things assist in the development of individual into sound and effective citizen (FRN, 2004).

Social Studies curriculum in schools consists of contents that need to be taught and learnt with innovative teaching and learning methods. Humans are multi-sensory animals so they learn better if all senses are involved in the learning process. This calls for teachers and students perceived use of teaching and learning methods especially the innovative ones. Teaching methods are the ways through which the teacher organizes and present contents and learning materials to learners (Orisa, 2011). Innovative teaching methods are the new instructional approaches that seem to make teaching and learning easier and facilitate learning. They also seem to enhance creativity among learners more than the conventional methods such as traditional (lecture), recitation, questioning among others. Innovative teaching methods include Computer assisted instruction, future wheel, flexible scheduling, individualized instruction, concept mapping, computers among others (Nwaubani, Okafor and Onyeanusi, 2014).

The Computer Assisted instruction is an innovative teaching and learning method which allows the learners in a friendly learning interaction with the computer to present and enjoy programmed learning activity. In using CAI, computers play the teacher's role as it provides and imparts knowledge and skills to the learners and pose problems, locate information and critically assess the information found in relation to the problems posed. Collaborating this assertion Ezeokeke (2009) asserted that CAI is a teaching method which involves the application of tutorials, drill and practice, simulation and problem-solving approaches while presenting topics in the classroom setting.

Social Studies needs to be learnt and taught in an active, interactive and effective way through the use of CAI which could make for more vivid and clearer presentation of unknown, abstract and complex concepts, ideas and information as well as retention of knowledge (Igba and Oyibe, 2012). Thus, NTI (2016) observed that the use of CAI seem to encourage a shift from teachers-centered model to learners-centered approaches if teachers are favorably disposed to it. Hypermedia systems are emerging that provides a frame work for storing, linking, cross-referencing and annotating data and spanning diverse information (text, graphics, audio, still and full motion video and computer soft ware). Such systems will allow Social Educators to represent the complex networks of data and allow students to explore those networks (Edinyang and Ubi, 2012). The use of CAI in the teaching and learning of Social Studies is desirable. It can work with the imagination of students, enhances self-spaced learning, self-directed learning, the exercise of various senses and the ability to represent content in a variety of media (Ajalabi, 2005). Any concept in Social Studies can be explained with the help of pictures and this visual image can help in the understanding of the concept at ease.

The traditional (lecture) method is the method that sees the teacher as the sole provider of knowledge, wisdom and delivers this to the learners in piece meal during class interaction (Asuquo, 2002). It is useful for emphasizing conceptual organizational clarifying issues, reiterating critical points and inspiring students to appreciate the important information. This motivational value of the lecture method is the reason the teacher can use the method and the lecture can take many forms. Uche and Enukoha (2012) opined that the lecture method enables the teacher to summarize the content and present it to the students in an understandable manner. The lecture method leads to the development of the cognitive domain of learning and the teacher must master the contents through rote memorization.

Contrary, Kozmo (2003) stated that the lecture method has limitations that if not considered can result in students' poor performance. One of them is that lecture method is essentially unidirectional mode of communication. It is always difficult for students to interact with the

lecturers and the discipline. This makes it difficult for the students to develop problem solving and creativity skills. The lecture method also does not enable the teacher to ascertain how much the learners have understood the lesson because much opportunity for interaction during the lesson is not provided. Based on the aforementioned methods of learning, this paper intend to empirically unmask the effectiveness of computer assisted instruction and lecture method of teaching and learning Social Studies in Cross River State College of Education Akamkpa, Cross River State, Nigeria.

Statement of the problem

The use of computer assisted instruction method in teaching and learning of Social Studies depends on how favorably disposed teachers and students are towards its effectiveness as a teaching and learning method. Most of the teachers that teach Social Studies are borrowed from other disciplines such as political Science, Geography, History, Government and Sociology. This study hence, intends to find out the impact of computer based learning in reference to the traditional (lecture) method.

Purpose of the study

The major purpose of the study was to unmask the effectiveness of computer assisted instruction in the teaching and learning of Social Studies in Cross River State College of Education Akamkpa, Cross River State, Nigeria. Specifically, the study intends to:

i. Evaluate the difference in the effects of the treatment (CAI) and control (lecture) groups methods on achievement as measured by the posttest of students' performance in Social Studies.

ii. Ascertain the difference in the effect of the treatment and control groups on attitudes as measured by the posttest of students' performance in Social Studies.

Research questions

The following research questions were raised to guide the study:

i. Is there any significant difference in the effect of the treatment and control groups on academic achievement as measured by the posttest of students' performance in Social Studies?

ii. Is there any significant difference in the effects of the treatment and control groups on attitude as measured by the posttest of students' performance in Social Studies?

Research hypotheses

The following null hypotheses were formulated and tested at 0.05 probability level:

i. There is no significant difference in the effect of the treatment and control groups on academic achievement as measured by the posttest of students' performance in Social Studies.

ii. There is no significant difference in the effects of the treatment and control groups on attitude as measured by the posttest of students' performance in Social Studies.

METHODOLOGY

This study adopted a quasi-experimental, non-equivalent control group design. The sample covered intact class of Social Studies Year 2 students in College of Education Akamkpa, Cross River State 2016/2017 academic session. The two methods, computer assisted instruction and lecture was used to teach Social Studies in the experimental and control group respectively for the sake of unmasking their effectiveness. While a self-designed performance test tagged: "Social Studies Performance Test (SOSPT)" was developed to access the performance of Sixty (60) Year 2 Social Studies students in order to establish effective teaching and learning of Social Studies. A 10-item questionnaire to elicit the students' attitude towards computer assisted instruction method (treatment group) and lecture method (control group). Also the questionnaire was distributed to the experimental and control groups in a pretest and posttest. The data collected were analyzed with t-test statistics. The null hypotheses developed for the study were tested at 0.05 level of significance. The instrument was face validated by three (3) experts from the department of Social Science Education, University of Calabar, Calabar. The indicated corrections and suggestions were duly integrated into the final draft of the instrument.

Table 1: A 10-item questionnaire to seek the opinion of the students on the effectiveness of both teaching methods (CAI and traditional).

S/N	Item	Effective	Ineffective
1	CAI helps teachers and learners to understand specific Social Studies contents.		
2	CAI facilitates better management of Social Studies contents while teaching and learning.		
3	Teachers and students acquire innovating teaching skills through CAI.		
4	CAI distracts students' attention to classroom instruction.		
5	CAI boosts students' and teachers' creative abilities.		
6	CAI develops students' skills of problem – solving		
7	Students learn more when using CAI method of teaching.		
8	CAI boosts students' reflective thinking skills.		
9	CAI is good for students who are mainly Sciences inclined.		
10	Most schools have computers for using CAI.		

Presentation of Results

The results of the study were presented according to the null hypotheses developed for the study.

Hypothesis 1

There is no significant difference in the effects of the treatment and control groups on achievement as measured by the posttest of students' performance in Social Studies. In order to test this hypothesis, independent t-test analysis was performed. The results are shown in table 2.

Table 2: Independent t-test analysis of effects of the treatment groups and control group on achievement as measured by the posttest of students' performance in Social Studies

Teaching method	Mean	SD	N	t-cal	t-crit
CAI	21.22	3.146	60		
Lecture	31.13	3.48	60	0.32	1.67

Significant at 0.05, df= 118, t-crit=1.67

The result in table 2 indicated that the calculated t-value 0.32 is bigger than the critical t-value of 1.67 at 0.05 significance level and 118 degree of freedom. This implied that there is a significant difference in the experimental group and control group on students' performance in Social Studies. Thus, the null hypothesis was rejected.

Hypothesis 2

There is no significant difference in the effects of the treatment and control groups on attitude of students as measured by the posttest of students' performance in Social Studies. The results are shown in table 3.

Table 3: Independent t-test analysis of difference in the effects of the treatment and control groups on attitude of the students as measured by the posttest opinion of the students

Attitude	Mean	SD	N	t-cal	t-crit
Treatment group	34.13	2.81	60		
Control group	33.24	3.10	60	-7.23	1.69

Significant at 0.05, df=118, t-crit=1.69

As shown in table 3, the calculated t-value is -7.23 while the critical t-value at 0.05 significance level and 308 degree of freedom is 1.69. Since the calculated t-value is far greater than the critical t-value, this means there is a significant difference in the attitude of students taught with computer based teaching method and lecture method of teaching. Specifically, students taught Social Studies with the computer assisted instruction method performed significantly better than their counterparts taught with lecture method as exemplified by the greater mean score. The null hypothesis is therefore rejected. The summary of the result showed that students' posttest performance in treatment group (using computer assisted instruction) method of teaching Social Studies is significantly different.

DISCUSSION

With regards to the academic performance of both the computer assisted instruction and lecture method, groups of students in the posttest level, invariably, one could not have expected anything different in their performances. This was because the selected students were drawn from intact class and none of them were exposed to any lesson before the test was administered. Thus, none of the groups was therefore expected to have an edge over the other at the posttest. The result of this study supports Kupotali (2003), Umoh (2004), Ewoh and Eteng (2006) Archibong (2009), Egomo and Obuyi (2009) and Edinyang (2011) who asserted that computer-assisted instruction enhance students' academic performance.

The findings of this study also revealed that computer assisted instruction although sparingly available were not used in teaching the students since they are not adequate enough. Therefore, there is extremely low integration of computer assisted instruction in teaching and learning Social Studies in schools. These findings are in collaboration with Okoye (2009); Nworgu & Oyim (2006) who reported non-availability of computers for teaching and learning Social Studies in Cross River State Secondary schools.

The findings of this study also revealed the challenges faced by Social Studies teachers and students in the teaching and learning of the subject. This is in tandem with the findings of Orisa (2011) who revealed that lack of electricity, lack and high cost of internet services, lack of time, affordability of computers and teachers and students poor knowledge of the computer are problems facing the use of computer assisted instructions in schools. These challenges go a long way to greatly affect the use of computer assisted instruction in Nigerian schools.

The authors agreed that students learn more and comprehend better when there are actively involved in the lesson. This is because any teaching procedure which involves students in some positive activities, as did the computer assisted instruction, is generally more effective than any other method which does not give room for learners' active participation as epitomized in the case of the computer assisted instruction of teaching and learning of Social Studies. Our experiences as practicing teachers have also revealed that, facts obtained by students in the computer assisted class have higher motivational values than facts merely dictated to students by the teachers.

CONCLUSION

It should however be noted that no one single method of teaching Social Studies can adequately fill all learning situations. The combination of other teaching methods would definitely help in achieving the desired Social Studies instructional objectives. The methods among others include computer assisted instruction, simulation, inquiry, project, demonstration, questioning, field trip, discussion and problem solving. Computer assisted instruction is one of the most effective innovative teaching method that could enhance academic performance of the learners and possibly promote effective teaching and learning of Social Studies. This position seems to have been proved by the findings of this study. Based on the foregoing, there is therefore the need for computer assisted instruction to be effectively institutionalized in the teaching and learning of Social Studies at every educational level in Nigerian schools.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

i.   Teachers should attempt to be ICT complaint to enable and enhance their chances of using computer assisted instruction innovative method in teaching Social Studies.

ii.   Government and other concern authorities should conduct ICT seminars, workshops and conferences for the teachers and students to help boost their knowledge of computer usage.

iii.   Government should adequately fund schools to enable them maintain computers in schools for the use of computer assisted instruction innovative method of teaching and learning of Social Studies.

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