Inquiry Method, Teacher Guided Discussion Method and Student’s Attitude and Performance in Social Studies

By Dr. Ogunbiyi Joseph Olukayode

University Utara Malaysia

Abstract - The integrated social studies curriculum has always advocated for the use of innovative method in the teaching and learning of the subject at all level. While this advocacy is well orchestrated by theoretical assumptions in literature, empirical support evidences are still extremely scanty. It was in the context of enhancing learning outcome through Inquiry Method that this study was undertaken. The study examined the relativeness of Inquiry Method and Teacher Guided Discussion method as against the conventional and traditional methods in teaching and learning outcome of some aspects of social studies in secondary schools.

A pre-test, post-test, control group experimental design involving two experimental groups and one control group was used in the research work. The subjects of the study consist of one hundred and twenty (120) junior secondary schools two (JSS 2) social studies students in Ifo Local Government areas of Ogun State. A twenty (20) item objectives questions consisting of fill-in the gap and multiple choice objectives test was used for relevant data collection. The results of the pre-test and post-test scores in SSAT were analyzed, using both the descriptive and inferential statistics. The findings showed that there were significant differences among the treat situations. The Inquiry Method (IM) was found to have been most effective in enhancing learning outcome of the subjects. It was also discovered that a significant statistical interaction existed between the methods of instruction and academic ability were however found to have performed better in SSAT than those on low academic ability in the treatment conditions.

GJMBR-E Classification : FOR Code : 160506, 160509, 930202

© 2012. Dr. Ogunbiyi Joseph Olukayode. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.
Inquiry Method, Teacher Guided Discussion Method and Student’s Attitude and Performance in Social Studies

Dr. Ogunbiyi Joseph Olukayode

Abstract - The integrated social studies curriculum has always advocated for the use of innovative method in the teaching and learning of the subject at all level. While this advocacy is well orchestrated by theoretical assumptions in literature, empirical support evidences are still extremely scanty. It was in the context of enhancing learning outcome through Inquiry Method that this study was undertaken. The study examined the relativeness of Inquiry Method and Teacher Guided Discussion method as against the conventional and traditional methods in teaching and learning outcome of some aspects of social studies in secondary schools.

A pre-test, post-test, control group experimental design involving two experimental groups and one control group was used in the research work. The subjects of the study consist of one hundred and twenty (120) junior secondary schools two (JSS 2) social studies students in Ifo Local Government areas of Ogun State. A twenty (20) item objectives questions consisting of fill-in the gap and multiple choice objectives test was used for relevant data collection. The results of the pre-test and post-test scores in SSAT were analyzed, using both the descriptive and inferential statistics. The findings showed that there were significant differences among the treat situations. The Inquiry Method (IM) was found to have been most effective in enhancing learning outcome of the subjects. It was also discovered that a significant statistical interaction existed between the methods of instruction and academic ability were however found to have performed better in SSAT than those on low academic ability in the treatment conditions.

I. INTRODUCTION

Social studies education is at least partly about information. The learning of this information is often regarded as an end itself, but in social studies, it is regarded as a means to more humane educational end. To achieve this humane satisfactorily, which is more than presentation of information, facts, concepts and generalizations must be processed to and from the learners, in order to provide the appropriate information to fulfill particular individuals’ social needs. The amount of environmental and social information processed in any social studies course, taking into consideration the needs of all students, at all times, is enormous, at its best, the processing of this information must be fast and accurate.

This is where the relevance of the computer becomes apparent and crucial. A computer is essentially a device for storing and retrieval of large amount of information, and for handling this information in specific ways in extremely short period of time. Computer has therefore amplified the possibility of information processing and transformation with high speed in the performance of this routine operation. S

Social studies is an integration of experience and knowledge concerning human relation for the purpose of citizenship education. The control goal of social studies is commonly given as education for democratic citizenship. However, this goal is typically divided into four parts; knowledge, skills, value and participation citizenship (Parker, 1991).

Teacher-Guided discussion strategies have been linked to open classroom situation in which each students is unique person, whom is endowed with intellectual ability to think and act both as an individual and as a group member. Students have the capability to meaningfully adjust to each other and to their world. Their coming together to work out social problem as a group is the shared goal of social studies curriculum and appropriate open classroom strategy.

There have been countless efforts by educators in Nigeria to promote innovative instructional methods and encouraging primary and secondary school teachers to abandon their long standing practices of rote-learning, memorizations and persistence teacher dominated instructional strategies. The new social studies curriculum demands the adoption of more progressive strategies of discovery, inquiry, discussion, problem solving, dramatization / role playing, computer assisted instruction, simulation games, and other relaxed classroom learning and teaching activities.

Many years of research indicate that computer technologies in schools can play a supporting role in the acquisition of these information-literacy skills if their uses are embedded in significant learning experiences with computer (Braun & Kraft 1995). Other studies have examined approaches using computer that can increase the benefits for both students and teachers Muir (1994). Jonassen (1996) concurs that when tools such as databases, spreadsheets, multimedia, e-mail, and net work search engines are utilized to complete projects requiring students to use information to solve problems,
there is a greater potential to promote cognitive development. These tools have the power to stimulate the development of intellectual skills such as inquiry, reasoning, problem solving and decision making abilities, critical and creative thinking; and learning how to learn. (Rose & Ferlund 1997).

There have been a lot studies on computer assisted instruction, which covers a wide range of domain of Biology, Geography, History, Economics etc but a hiatus still exist in the domain of social studies especially with reference to our local society. The pressure to computerize has had importance implication to social studies educators. However, the desire of Nigerian educators to promote and encourage innovative instructional methods among the primary and secondary school teachers has led to the discovery of various innovative teaching methods. The study also investigates the influence of academic ability and gender to the students learning outcome in some aspects of social studies. The purpose of this study is to examine the effect of Computer assisted Instruction and Teacher Guided Discussion to the students learning outcome in some aspect of social studies.

II. PURPOSE OF THE STUDY

The desire of Nigerian educators to promote and encourage innovative instructional methods among primary school and secondary school teachers has led to the discovery of various innovative teaching methods. The purpose of this study is to examine the effect of Computer assisted Instruction and Teacher Guided Discussion to the students learning outcome in some aspect of social studies.

III. STATEMENT OF THE PROBLEM

Despite the importance of social studies in the development of an individual and the society in general, and several calls for innovative instructional methods such as computer assisted instruction and teacher guided discussion in social studies, social studies lesson are still characterized by the traditional chalk and talk method of teaching. There have been a lot studies on computer assisted instruction, which covers a wide range of domain of Biology, Geography, History, Economics etc but a hiatus still exist in the domain of social studies especially with reference to our local society. This study therefore, was designed to determine the relativeness of the Teacher Guided Discussion and Computer Assisted Instruction on junior secondary school students academic achievement in some aspects of social studies. The study also investigate the influence of academic ability and gender on students' learning outcome.

IV. HYPOTHESES

HO₁: There is no significant difference in the mean post-test achievement scores of subjects exposed to the different treatment conditions

HO₂: There will be no significant difference in the mean post-test scores on achievement of high and low academic subjects exposed to the different treatment conditions.

V. SAMPLE

The subject for the study comprises of one hundred and twenty junior secondary school students selected from three secondary schools within Ado-Odo/Ota and Ifo local government in Ogun State. A three stage stratified random sampling procedure was used in selecting the subject. First, All secondary schools located within Ado-Odo/Oota and Ifo local government area constitute the target secondary schools.

After this initial categorization, three secondary schools were randomly selected using simple random sampling procedure. On selecting the secondary schools, all the Junior secondary II social studies students in each schools were taken as the “intact” groups. These three groups of subjects in the selected schools were randomly allocated to one of the two experimental situations. While all students were involved in the teaching and testing sessions, only 40 were randomly selected in each group for the purpose of analysis and discussion.

VI. CONCEPTS SELECTED FOR THE STUDY

The two concepts in social studies selected for the study are as follows.
Culture and Identity
Migration and its effect on the family

VII. INSTRUMENTS

The following instruments were designed and used by the researcher:
i. Students Intelligence Test (SIT)
ii. Social Studies Achievement Test (SSAT)
iii. Computer-Assisted Instruction Materials (CAIMS)
iv. Teacher-Guided Discussion Materials (TGDMS)

Instruments III and IV (CAIMS), (TGDMS) are teaching materials for the two instructional methods (Computer-Assisted Instruction and Teacher Guided Discussion). The instruments II (SSAT) is the criterion measures for the study. All the above instruments focused on social studies topics selected for the study. The first instrument (SIT) was used in categorizing the categories of subjects into high and low academic ability.

VIII. RESULT AND DISCUSSION

a) Effects Of Teaching Methods On Cognitive Learning Achievements

The data presented in table 1, 2 and 3 indicate the summary of descriptive statistics of the pre-test and post-test scores of the three groups, while table 4...
specifically shows the mean gain scores in the two treatment groups.

**Table 1:** Descriptive Statistics Of The Pre –Test And Post Test Scores According To Treatment Groups: The Mean Gain Score.

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Teacher Guided Discussion</th>
<th>Computer Assisted Instruction</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>SSAT 10.47</td>
<td>13.92</td>
<td>11.77</td>
</tr>
<tr>
<td>Post-Test</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Pre-Test</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Post-Test</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 above represents the performance of subjects in both pre-test and post-test in the computer assisted instruction treatment group, obtained the highest post-test mean scores in the criterion measures. The subject exposed to the Teacher –Guided Discussion Method scored higher than those in the control group in the post-test mean scores.

**Table 2:** Descriptive Statistics Of Scores According To Academics Abilities And Treatment Groups

<table>
<thead>
<tr>
<th>Test Type</th>
<th>PRE –TEST</th>
<th>POST-TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TGD</td>
<td>CAI</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>SSAT</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>X</td>
<td>5</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>N</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>X</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2 as presented above shows that performance of the academic ability group differ in the criterion measures under the different conditions. It can be seen that the high academic ability groups performed better than the low academic ability groups in the mean post-test scores in the criterion measures given in the different treatment conditions.

**Table 3:** Summary of Analysis of Variance on The Post-Test Academic Scores of subjects.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares (SS)</th>
<th>Degrees of Freedom</th>
<th>Means Square</th>
<th>F Cal</th>
<th>F Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Sum of squares (SSb)</td>
<td>439.33</td>
<td>2</td>
<td>219.66</td>
<td>5</td>
<td>18.2</td>
</tr>
<tr>
<td>Within Sum of squares (SSw)</td>
<td>1408.5</td>
<td>4</td>
<td>117</td>
<td>12.039</td>
<td></td>
</tr>
<tr>
<td>Total Sum of squares (SSt)</td>
<td>1847.8</td>
<td>7</td>
<td>75</td>
<td>119</td>
<td></td>
</tr>
</tbody>
</table>

From the summary of the ANOVA, as shown in table 3 above, it could be seen that there is a significant effect main effect (F =18.25, t critical < 3.07). The obtained values of F is greater than the critical F value F (tab). Thus shows that the difference in the three experimental conditions is significant.

**HO:** There will be no significant difference in the mean post-test scores on achievement of high and low academic subjects exposed to the different treatment conditions.

Table 2 as presented earlier on shows that academic ability had a highly significant main effect on the variations in subjects achievement (high academic ability \( \chi = 15.30 \); and Low academic ability \( \chi = 9.66 \)). Table 4 gives a full detail performance of two academic ability groups in all the treatment conditions.

**Table 4:** Mean, Standard Deviation And T-Test Comparison Of Achievement Scores Ha And La Subjects In Each Of The Instructions.

<table>
<thead>
<tr>
<th>Instruction Mode</th>
<th>Gender</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>t-Obtained</th>
<th>t-Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Guided Discussion</td>
<td>E 1</td>
<td>HA</td>
<td>2</td>
<td>3</td>
<td>17.9</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LA</td>
<td>1</td>
<td>1</td>
<td>10.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Computer Assisted Instruction</td>
<td>E 2</td>
<td>HA</td>
<td>1</td>
<td>8</td>
<td>18</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LA</td>
<td>2</td>
<td>2</td>
<td>10.6</td>
<td>1.0</td>
</tr>
</tbody>
</table>
The post-hoc analysis (table 4) above, shows that high and low academic ability groups performed significantly differently in both E1 and E2 treatment conditions, [ E1: High academic ability $\chi^2 = 17.9$; and Low academic ability $\chi^2 = 10.6$ ; and in E2 : high academic ability $\chi^2 = 18$; and Low academic ability $\chi^2 = 10.6$]. It is of interest to observe that the high academic ability group in E2 treatment condition performed highly better than the subjects (high academic groups) in E1 and control group. It was also observed that even in control group, the high academic group recorded a higher mean score above the low academic ability group. Even though the difference between the mean achievement scores of the high and low academic groups in the different treatment conditions was not found to be statistically significant, table 4 shows that the subjects in the Computer Assisted Instruction (E2) recorded better and higher mean achievement score than the subjects in (E1) and control treatment conditions. Consequently, this can be interpreted to mean that the computer Assisted Instruction seems to possess the capacity to promote higher cognitive attainment than teacher –Guided Discussion (E1) and Modified Lecture method in the learners.

On the basis of all these findings, the null hypothesis $H_0$, which stated that there will be no statistically difference in the mean post-test scores on achievement high and low academic ability subjects exposed to the different conditions, is therefore not accepted.

The result therefore shows that high or low academic served as an important intervening variables in the study; with high academic ability subjects consistently performing better than their counterparts in the low academic ability group in the treatment condition. The results also indicates that the subjects exposed to the Computer assisted Instruction (E2) consistently performed better and score higher in the achievement criterion measures, than the subjects exposed to Teacher Guided Discussion (E1) and control group.

### IX. Recommendation

A lot of works on the use of innovative teaching methods have been done by various researchers as cited in the introductory aspect of this paper. The findings of this studies also highlights that social studies teachers should endeavour to apply various innovative methods such as Computer Assisted Instruction in the teaching of Social Studies in secondary schools.

Seminar and workshop should be organized from time to time by the ministry of education and other concerned bodies to acquaint teachers with the latest and most appropriate teaching models and how they can be properly utilized to facilitate learning.

Teachers of social studies should be exposed to fundamentals knowledge of Computer-Assisted Instruction and its implications in the classroom.

The social studies curriculum should be reviewed to accommodate topics and issues that can be computerized and to include Computer-Assisted Instruction method among the various methods of instruction recommended in the curriculum.

### X. Conclusion

This study was designed to examine the relative effectiveness of Computer-Assisted Instruction and Teacher Guided Discussion as against the conventional and traditional methods, in teaching and learning social studies in secondary schools. The study also investigated the interactive effects, if any of achievement ability of the subjects on their achievement scores in the SSAT criterion measures.

A pre-test, post-test, control group experimental design involving two experimental groups and one control group was used in the research work. The subjects of the study consist of one hundred and twenty (120) junior secondary schools two (JSS 2) social studies students in Ado-Odo / Ota Local Government areas of Ogun State. A twenty (20) item objectives questions consisting of fill-in the gap and multiple choice objectives test was used for relevant data collection. The results of the pre-test and post-test scores in SSAT were analyzed, using both the descriptive and inferential statistics.

The results of the study were as follows:

The findings showed that there were significant differences among the treat situations. The Computer Assisted Instruction (CAI) was found to have been most effective in enhancing learning outcome of the subjects. It was also discovered that a significant statistical interaction existed between the methods of instruction and academic ability were however found to have performed better in SSAT than those on low academic ability in the treatment conditions.

As one of the earliest attempt in the area of innovative method of teaching social studies for enhancing effective learning outcome in the learner, this study seems to have successfully contributed to the frontier of knowledge on the efficacy of Computer Assisted Instruction in promoting learning outcome in some aspect of social studies. Thus, this study has generated some evidence in support of the theoretical assumptions and empirical assertions about the effectiveness of Computer-Assisted Instruction with
particular reference to Banks (1977); Akinlaye (2003); Modern (1994); Powell (1995) respectively.

While there is need for caution in generalizing the findings of this investigation, in view of its limitation, this report has somehow contributed to the frontier of knowledge on the effectiveness of the Computer-Assisted Instruction, to develop and enhance learning outcome in the learners.

**References Références Referencias**