



## **Effects of Instructional Materials on Students' Achievement in Social Studies in Lower Basic Education in Nigeria**

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### **Abstract**

This study was carried out to ascertain the Effects of Instructional Materials on Students' Achievement in Social Studies in Lower Basic Education in Nigeria using Ebonyi State College of Education Ikwo Staff School and Christ the King Primary School, Ikwo as the case study. The design of the study was quasi experimental. The population of the study comprised all the students in primary five of the two schools used for the study totaling two hundred (200). Due to the smallness of the number, no sampling was carried out on the population. However, simple random sampling technique was applied to choose the experimental and control groups. The instrument for data collection was Social Studies Achievement Test (SSAT) questionnaire. It contained a twenty (20) item multiple choice questions based on the topics selected for the study. The face and content validity of the instrument was ascertained by three experts-two from Social Studies Department, Ebonyi State College of Education, Ikwo and one from Measurement and Evaluation Unit of Faculty of Education in Ebonyi State University, Abakaliki. Kuder Richardson -20 statistic was used to test the reliability of the instrument and it yielded 0.80 which was deemed high enough for the study. The research questions were analyzed using adjusted mean and standard deviation. Analysis of covariance (ANCOVA) was used to test the null hypotheses. The result revealed that those taught with instructional materials performed significantly better than those taught without instructional materials. Significant cases were assessed using multiple classification analysis to determine contribution of each treatment to the level of significance. Based on this finding, it was recommended that instructional materials should be used in the teaching of Social Studies since it enhances students' performance.

**Keywords:** Effects, Instructional Materials, Achievement, Social Studies

## Introduction

One of the innovations in the Nigerian educational system is the introduction of several new subjects at different levels of education. The Social Studies programme is one of such curriculum innovations since it is relatively new in the school curriculum. Orakwe (2000) refers to Social Studies instructional materials as information repositories from the society sourced to transfer the desired information to the learners during classroom instruction. Agwu (2001) views instructional materials as those apparatus of teaching which may include textbooks, workbooks, charts, audio visual aids, chemicals, specimens and other relevant things that will attract student s' attention, and which should only be introduced at the appropriate time by the teacher. Simply put, instructional materials are those which a teacher puts into use to promote the effectiveness of instructions and which also helps him/her to communicate more effectively to the learners. Social Studies is a subject that aims at helping students who are creative, patriotic, responsible and are able to contribute to the development of the nation (Ezegbe, 2008). Okojie (2005) supportively maintained that the ultimate goal of Social Studies is to equip individuals with knowledge and understanding for effective relationships and living. Due to its usefulness in national development, it has gained wide acceptance to the extent of becoming one of the core subjects at the basic education level.

In spite of the importance of Social Studies in national development and the efforts of stakeholders to encourage the study of the subject, students have continued to show poor achievement (Agara, 2010). Omabe (2006) agreed that students' achievement in social studies leaves much to be desired. Nonetheless, a number of factors have been attributed to poor achievement in junior certificate examination in social studies. One of such factors is non-use of instructional materials. Social studies according to Igu (2012) is an activity based subject and therefore depends on instructional materials utilization for effective teaching. Omabe (2006) asserted that instructional materials are central in the teaching and learning of social studies because no matter the efficiency of a teacher, effectiveness in lesson delivery cannot be guaranteed without the use of instructional materials. Esu, Erukoha and Umoren (2004) affirmed that instructional materials facilitate learning of abstract concepts by helping to concretize ideas and stimulate learners' imagination. Moreover, instructional materials help to increase active participation in the learning process while saving teacher energy, reducing the verbal instructions. In the same vein, Mathew (2012) stated that the use of instructional materials make teaching effective as it enables learners to participate actively in classroom instruction. All these views suggest that the use of instructional materials bring about improved students' performance.

However, in a clear departure from the above views, Orji (2012) and Ekpe (2010) in their independent studies, agreed that instructional materials are not necessarily important if the learners are intelligent and the teacher has good mastery of the subject matter. Egbu (2012) argued that involving learners in classroom activities is what matters most as it makes teaching learner centered. He further maintained that involving learners in classroom activities helps learners to discover new knowledge and gain new insights. From the views of the scholars cited above, there is a strong argument on the place of instructional materials in the teaching of social studies to improve students' achievement hence the need for this study.

Literature search has revealed that, a number of studies have been done on the various aspects of instructional materials. Eke (2010) carried out a survey study on the roles of instructional materials in teaching social studies in primary schools in the Isukwato Local Government Area of Abia State. The finding showed that instructional materials make abstract ideas concrete and easier to understand. Arisi (1998) carried out a study on the usage of instructional materials by social studies teachers in junior secondary schools in Oredo Local Government Area of Edo State. In this study female teachers were found to use instructional materials more frequently than the male social studies teachers. The finding equally showed that female teachers are more predisposed than the male teachers in terms of the improvisation of instructional materials. Williams (2004) conducted a study on the extent of utilization of instructional facilities in secondary schools in the Gboko Education Zone of Benue State, which found that instructional facilities appear to be inadequate. Nwafor (2012) carried out a study on the availability and utilization of social Studies instructional materials in secondary schools in Onueke Education Zone of Ebonyi State. According to this study, instructional materials were available but little utilized. Ifeaka (2005) studied the influence of the production and utilization of instructional materials on students' attitude to chemistry in Anambra State. The results revealed that chemistry teachers tend to show a poor attitude towards the production of instructional materials.

The above reviewed works have a relationship with the present study as they all focused on some aspect of instructional materials; however they also differed significantly from the present study in content and geographical scope, hence, creating a gap in knowledge in terms of achievement. The interest to fill this existing gap in knowledge is the premise on which this study stands, which is to determine the effects of instructional materials on students' achievement in social studies.

### **Problem Statement**

The activity based nature of social studies makes it difficult for the subject to be taught effectively without instructional materials. But research findings that indicate poor achievement of students in social studies seem to suggest that instructional materials may not have been properly utilized during instruction and this is a source of worry to the researchers considering its possible effects on students' achievement in the subject. The problem of this study therefore is: what could be the effect of instructional materials on students' achievement in social studies?

### **Research Questions**

The study was guided by the following research questions.

1. What is the mean achievement scores of students in social studies when taught with instructional materials and when taught without instructional materials?
2. What is the achievement scores of male and female students when taught with instructional materials and when taught without instructional materials.

### **Hypotheses**

HO<sub>1</sub>: There is no significant difference in the mean achievement of students when taught with instructional materials and when taught without instructional materials.

HO<sub>2</sub>: There is no significant difference in the mean achievement of male and female students when taught with instructional materials and when taught without instructional materials.

## **Methodology**

The design adopted in the study was quasi-experimental. Specifically, a pre-test and post-test control group design was implemented. The design involved students from intact classes. The study made use of the experimental group and the control group. The experimental group was taught with instructional materials while the control group was taught without instructional materials. The population of the study was comprised of two hundred primary five students made up of eighty (80) students for the control group and one hundred and twenty (120) students in the experimental group. The students were from Ebonyi State College of Education, Ikwo Staff School and Christ the King Primary School, Ndiufu Alike, Ikwo in Onueke Education Zone of Ebonyi State. No sampling was carried out due to the small number of the population. However simple random sampling was carried out to select the experimental and control groups. The instrument for data collection was an achievement test titled Social Studies Achievement Test (SSAT), which was a 20 item multiple choice questions developed by the researchers and based on the selected topics from primary five social studies curriculum. The face and content validity of the instrument was ascertained by 3 experts –two from Social Studies Department of Ebonyi State College of Education, Ikwo and one from Measurement and Evaluation Unit of Science Education Department of Ebonyi State University, Abakaliki. Their corrections and input were applied to make the instrument valid. The reliability of the instrument was determined using Kuder Richardson -20 statistic, which yielded a reliability index of 0.80 hence proving to be an adequate instrument for the study.

The research questions were answered using an adjusted mean and standard deviation, while the hypotheses were tested using an analysis of Covariance (ANCOVA). Significant cases were assessed by means of multiple classification analysis to determine the contribution of each treatment level to the significance.

### **Experimental Procedure**

Before the commencement of the experiment, the researchers sought approval from the Schools' Management and regular class teachers; and explained the purpose of the study and treatment implementation. Based on this need, the same lesson periods were approved for social studies in the Schools for the study within the experimental period. A pre-test on social studies achievement on the selected topics for the experiment were administered by the teachers to ascertain the level of achievement of students. After the pre-test, the regular social studies teachers commenced the experiment in their respective schools, adhering strictly to the lesson plans written by the researchers. The experimental group was provided with all the necessary instructional materials needed for teaching the topics such as: charts, pictures, video clips, etc. The experiment lasted for four weeks after which the same instrument was re-administered on the two groups as post-test.

## Results

### Research Question 1

What are the achievement scores of students in social studies when taught with instructional materials and when taught without instructional materials?

**Table 1: Mean Results of Students based on instructional Materials**

Variable	No	Adj. Mean	S
With instructional material	120	66.88	8.5
Without instructional material	80	34.85	11.50

The results revealed that students taught with instructional materials had an adjusted mean of 66.88 as against 34.85 scored by the students taught without instructional materials. This means that students taught with instructional materials achieved better scores than those taught without instructional materials.

### **Research Question 2**

What is the achievement score of male and female students taught with instructional materials and when taught without instructional materials?

**Table 2: Mean Results of Male and Female Students Taught with Instructional Materials and when Taught without Instructional Materials**

Variable	Male			Female		
	No	Mean	SD	No	Mean	SD
With instructional material	58	63.46	9.09	62	70.08	8.70
Without instructional material	41	39.56	10.38	39	29.89	12.79

The results in Table 2 revealed that female students taught with instructional materials had 70.08 whereas the male students taught with instructional materials scored an average of 63.46; while on those taught without instructional materials, males had mean achievement scores of 39.56 as compared with 29.89 achieved by females. It appears that females taught with instructional materials achieved better results than males taught with instructional materials. On the other hand males taught without instructional materials achieved better than females taught without instructional materials.

**HO<sub>1</sub>:** There is no significant difference in the mean achievement of students in social studies when taught with instructional materials and when taught without instructional materials.

**Table 3: ANCOVA Results based on Instructional Materials**

Source of variation	Sum of squares	Df	Mean square	f-cal	Sig of F	f-crit
Covariates	4679.438	1	4679.438	39.995	.000	
Pretest	4679.438	1	4679.438	39.995	.000	
Main effect	44576.317	1	44576.317	380.990	.000	
Instructional materials	44576.317	1	44576.317	380.990	.000	3.84
Explained	49255.755	2	24627.877	210.492	.000	
Residual	23048.265	197	117.001			
Total	72305.020	197	363.342			

Significant at  $P < 0.05$

Hypothesis 1 states that there is no significant difference in the mean achievement of students when taught with instructional materials and those taught without instructional materials. From the results in Table 3, F-cal is greater than F-crit. ( $380.990 > 3.84$ ) at 0.05 alpha level. Hence HO<sub>1</sub> is not accepted. This implies that

there is a significant difference in the mean achievement of students taught with instructional materials and those taught without instructional materials. Since  $H_{O1}$  is significant, multiple classification analysis is carried out to determine the level of contribution of each variable (with and without instructional materials) to the significant.

**Table 4: Multiple Classification Analysis Results**

Grand mean = 54-07.

Variable + Category	N	Unadjusted Dev,n	Eta	Unadjusted independents covariates dev.n	for +	Beta
With instructional materials	120	12.81		12.79		
Without instructional materials	80	-19.22	.83	-19.19		.82
Multiple R squared						.681
Multiple R						.825

Based on the results of Multiple Classification Analysis (MCA), using instructional materials, an adjusted mean of 67.86 was scored, while not using instructional materials had an adjusted mean of 34.84. Therefore using instructional materials to teach social studies is facilitated significantly with better scores than when not using instructional materials.

**$H_{O2}$ :** There is no significant difference in the mean achievement of male and female students in social studies when taught with instructional materials and without instructional materials.

**Table 5: ANCOVA Achievement Result in Social Studies based on Gender**

Source of variation	Sum of squares	Df	Mean square	f-cal	Sig of F	f-crit
Covariates	61679.438	1	4679.438	13.632	.000	
Pretest	61679.438	1	4679.438	13.632	.000	
Main effect	2.841	1	2.841	.008	-.928	
Gender	2.841	1	2.841	.008	-.928	3.84
Explained	4682.278	2	2341.139	6.820	.001	
Residual	67622.742	197	343.263			
Total	72305.020	197	363.342			

Not significant at  $P < 0.05$

$H_{O2}$  states that there is no significant difference in the mean achievement of male and female students when taught with instructional materials and when taught without instructional materials. From the result of data analysis in Table 5, the null hypothesis was not rejected because the F-crit of 3.84 is greater than F-cal of .008.

### Discussion

Results in Table 1 showed that students taught with instructional materials performed better than those taught without instructional materials. This finding is supported by the findings of Esu, Eukoha and Umoren (2004) that instructional materials facilitate learning of abstract concepts by helping students to concretize ideas and also stimulate their imagination. This finding equally lends credence to the view of Mathew (2012) who had earlier stated that the use of instructional materials make teaching effective as it enables learners to participate actively in classroom instruction, which subsequently leads to improved achievement.

Results in Table 2 showed the mean results of male and female students taught with instructional materials and those taught without instructional materials. The

finding of the study that the females performed better than the males suggests that females are more receptive to the use of instructional materials than the males. This finding may help to explain Arisi (1998) who found that female teachers are more willing to use instructional materials than the male teachers and also that female teachers are more pre-disposed to improvising instructional materials. It appears that gender sensitivity may have played an important role in female students' ability to achieve higher scores through instructional materials than male students.

The significant difference in the testing of hypothesis one ( $H_{O1}$ ) establishes the fact that instructional materials are indispensable for teaching and learning. This finding is supported by the findings of Eke (2010) in his study on the roles of instructional materials in the teaching of social studies. His study revealed that instructional materials make abstract concepts become concrete.

The finding of the study that there is no significant difference in the mean achievement of male and female students when taught with instructional materials and when taught without instructional materials supports the views of Orji (2012) and Ekpe (2010) who reported that the intelligent quotient and teaching methods are major factors in students' achievement.

### **Educational Implications**

The findings of this study have implications for the effectiveness of social studies teaching and learning in primary education level. The study has shown that instructional materials facilitate the teaching of social studies. The implication is that performance is enhanced when teachers use different types of instructional materials when teaching all subjects and particularly social studies.

### **Recommendation and Conclusion**

Based on the findings of this study, it is recommended that instructional materials for the teaching of social studies should be made adequately available by the relevant stakeholders. Teachers should ensure that available instructional materials are put into maximum use during class instruction. The study therefore concluded that instructional materials are indispensable in the teaching of social studies for improvement in students' achievement.

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