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## EFFECT OF IMPROVISATION OF INSTRUCTIONAL MATERIALS ON ATTITUDE AND ACADEMIC PERFORMANCE OF NOMADIC PUPILS IN SOCIAL STUDIES IN NOMADIC PRIMARY SCHOOLS IN NORTH EASTERN STATES OF NIGERIA

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Hassan Dan Azumi Audu  
PEDN Department  
Federal College of Education, Yola  
Email: [dahassan@fceyola.edu.ng](mailto:dahassan@fceyola.edu.ng)

**ABSTRACT:** This paper examined the effect of improvisation of instructional materials on attitude and academic performance of nomadic pupils in social studies in north eastern Nigeria. The study adopted a quasi-experimental, pre-test, post-test, non-equivalent, control groups design. The study sampled 257 Primary V students across the 12 nomadic schools across six states in north eastern Nigeria at rate of two schools per state. The instruments for data collection were Social Studies Attitude Inventory (SSAI) and Social Studies Achievement Test (SSAT). The SSAI was adapted and modified from Attitude Scale (AS) designed by Aiken and Aiken (1969) before improved on by Ahlgren and Walberg (1973). The scale comprised of 40 items, based on a five- point Likert scale. The Social Studies Achievement Test was a multiple choice objective test which consists of 30 items based on primary V curriculum for first and second terms. ANCOVA analysis was used for data analysis. The study found the set of nomadic pupils taught social studies with improvised instructional materials recorded academic performance and positive attitude significantly higher than those set of nomadic pupils without instructional materials. The study concluded that social studies required instructional materials for effective teaching in nomadic schools. Therefore, the study recommended that in the case of lacked readymade instructional materials the social studies teachers should endeavour to improvise instructional materials suitable for teaching and learning social studies in peculiar to lifestyle of nomadic pupils.

**Keywords:** Improvisation, instructional materials, attitude and academic performance

### INTRODUCTION

An influence of instructional materials in promoting pupils academic performance in teaching and learning of social studies is indisputable. The materials used by teachers to teach and drive home their points in

social studies at all level of education are incontrovertibly paramount. Instructional materials are highly relevant to establish classroom interaction and successful transfer of knowledge from the teacher to the learners. Instructional materials are materials which assist teachers to make their lessons explicit to learners irrespective of their level or ages. They are also used to transmit information, ideas and notes to learners (Edinyang & Effiom, 2017). Instructional materials on the other hand can be simply defined as sophisticated items use to promote teaching effectively. However, instructional materials can be regarded as a tangible or hardware device use by a teacher in the classroom for better understanding of the learners.

The negative indices such as poor academic performance in nomadic school specifically in social studies as well as general dislike of many aspects of schools by pupils could be attributed to many factors among which teacher's strategy itself was considered as an important factor. This implies that the mastery of a subject concept might not be fully achieved without the use of instructional materials. Teaching social studies without instructional materials may certainly result in poor academic performance, though, most social studies teachers believe that the subject required lesser materials. The Federal Republic of Nigeria (2014) emphasizes the need for teaching and learning of subject at lower base classes with instructional teaching aids. The policy recommends practical, exploratory and experimental methods of teaching. In this regards, Edinyang and Effiom (2017) stated that the basic tools that befitting young students are the instructional materials.

Thus, it become paramount that the use of instructional materials for teaching subject like social studies eases the challenges of learning mostly experience by pupils especially the nomadic pupils. However, one of the common scenarios is to find that most nomadic pupils show their dislikes to formal schools, simply because the materials used are foreign or have no connection with pupils' background. One among the few ways to make the instructional materials relevant in

teaching social studies in nomadic schools and connect the pupils background with classroom activities is for teachers to look inward into local materials suitable for teaching social studies. This study therefore intends to examine the effect of improvisation of instructional materials for teaching social studies in nomadic primary schools in North Eastern States of Nigeria.

### STATEMENT OF THE PROBLEM

The effect of instructional materials utilization on teaching and learning cannot be overemphasized. Human learn and remember 10% of what they hear, 40% of what they discuss with others and as high as 80% of what they experience directly or practice. Different approaches to substitute instructional materials with modern technology such as computers and virtual applications are still yielding gap due to fact that most of computer application were design based on foreign standard and the illustration used for simulation are also foreign. More so, in developing nation like Nigeria, 80% of nomadic schools are not connected to power grid, thereby make the use of computer as instructional materials remains mere dream. Thus, to make a comprehensive instructional material for teaching social studies, teachers need to come up with idea of using local materials for instructional materials. It is expected that when students were allowed to lay hands on instructional materials, especially those improvised from rural communities their interest to learn increases (Mezieobi & Mezieobi, 2013). Meanwhile, studies by Nwaubani, Otoh-Offong, Usulor, and Okeke (2016), Kankam, Bordoh, Eshun and Bassaw (2015) and Awhen, Edinyang, and Ipule (2014) argued that social studies is not like other subjects where instructional materials define learners gain. Thus, these researchers are of the opinion that performance in social studies has nothing to do with instructional materials. As arguments are going for and against the performance of nomadic pupils based on teachers ability to improvise instructional materials. It becomes paramount for this study, to seeks further empirical evidence to establish whether teachers ability to improvise instructional materials from local materials affected the performance

of students in social studies or not, especially in North Eastern part of Nigeria where numerous nomadic schools are present.

## PURPOSE OF THE STUDY

The purpose of this study is to examine the effects of improvised instructional materials on the teaching and learning social studies in nomadic primary schools in north eastern states of Nigeria. Specifically the study is set to:

1. Ascertain the effect of utilisation of improvised instructional materials on the pupils performance in social studies in North eastern Nigeria
2. Determine the difference in the effect of improvised instructional materials on the academic performance of male and female nomadic pupils in social studies in north eastern Nigeria.
3. Ascertain the effect of improvise instructional materials on attitude of nomadic pupils toward social studies in north eastern part of Nigeria
4. Determine the difference in the effect of improvisation of instructional materials on attitude of male and female nomadic pupils towards social studies in north eastern part of Nigeria

## HYPOTHESIS

- H<sub>01</sub>: There is no significant difference in the academic achievement of nomadic pupils toward social studies when taught using improvised instructional materials and those without instructional materials in north eastern Nigeria
- H<sub>02</sub>: There is no significant difference between mean achievement scores of male and female nomadic pupils in social studies when taught using improvised instructional materials.
- H<sub>03</sub>: There is no significant difference in the attitude of nomadic pupils toward social studies when taught using improvised instructional materials and those without instructional materials in north eastern Nigeria

H<sub>04</sub>: There is no significant difference in the mean attitude of male and female nomadic pupils toward social studies when taught using improvised instructional materials

## PREVIOUS STUDIES

### Concept of Instructional Materials

According to Mezieobi and Mezieobi (2013) instructional materials refers to the human and non-human materials and facilities that can be used to ease, encourage, improved and promote teaching and learning activities at various level of education. The instructional materials are whatever materials used in the process of instruction by teachers. They are the tools used in educational lessons, which includes active learning, assessment and programme evaluation. Basically, any resource a teacher use to help him teach his students is an instructional material. Instructional materials include both visuals and audio visuals such as pictures, flash cards, posters, charts, tape recorder, radio, video, television, computers among others. These materials serve as supplement to the normal processes of instruction and offers better understanding of concept to students irrespective of their ages and backgrounds.

### Improvisation of Instructional Materials

Improvised materials are materials that are used in the absence of the real, original or delicate objects to bring about the same learning effect that the real or complicated materials would have brought. These materials can be invented or produced from readily available materials within the environment. The use of locally produced instructional materials in the teaching learning situation has many advantages especially when considered the peculiarity of nomadic environment. Some of the advantages of improvised instructional materials include relatively cheaper, appropriateness to teach in classroom, motivating learners' participation, increasing learners interest and suitability for peculiar set of pupils such as nomadic (Olalobou, 2010). Some disadvantages of improvised instructional materials earlier noted by Awhen et al. (2014) include possibility of

demoralizing pupils' interest and participation if poorly designed. Also, there are instances when local materials may be scarce or the locally improvised materials may lack safety quality for the pupils. Therefore, Nwaubani et al. (2016) advocated for teacher's resourcefulness, especially those handling nomadic schools when considered the type of life style of pupils and overall nature of nomadic education. Also, Nwanekezi and Ibekwe (2017) encouraged teachers to search for necessary instructional through local means to supplement or replace the standard ones. Kankam et al. (2015) also agreed that the best way for teachers to make use of their manipulative skills is to improvise so as to achieve their lesson objectives at least to a reasonable extent. Olalobou (2010) also identified the importance of improvisation of instructional materials as making learning concrete and real, substitute's one thing for another, and allows the pupils to participate in the classroom activities.

### **Effective Use of Improvised Instructional Materials**

According to Akubailo, Ugo, Ugo, Ugochukwu and Ikehi (2019), when a teacher improvises, it enables him/her to rethink and research for cheaper, better, and faster methods of making the learning process easy and safe for both the pupils and the teachers. Kankam et al. (2015), maintained that improvisation of instructional materials provides direct experiences with reality as well as encourage active participation and acquisition of skills especially where pupils are allowed to manipulate the materials. Nwaubani et al. (2016) are of the view that the attainment of affective and psychomotor domains is increased by improvisation. When students are motivated by their teacher to produce or source their own instructional material, it greatly arouses the students' interest to learning and development of scientific attitude. Improvisation therefore, enables students to exhibit their latent potentialities, improve their creativity and as well discover new things. The nomadic pupils could be assigned to come up with locally design materials suitable for subject explanation in classroom. Kankam et al. (2015) reported that the use of improvised



instructional materials make the teaching and learning process a result oriented exercise, and enhances students' achievement. However, Akubuilu et al. (2019) recently discovered that the use of improvised concrete instructional materials for instructional process enhances visual imagery, stimulate and as well scintillate the learning, thereby creating room for higher concentration and individualized approach to concept mastery. This could have been responsible for gender blending in the achievement of the pupils in subject such as social studies. Similarly, Umađi (2012) found that improvised instructional materials bridged the attendant achievement gap between male and female students in sciences. In teaching and learning, the use of improvisation in teaching is advocated as a substitute when the standardize materials are not available. Engaging pupils especially grown up nomadic pupils in the improvisation of locally based instructional material could promote learning by doing and skill acquisition for further use and for achievement of self-reliance among nomadic pupils. Self-reliance involves optimal utilization of local materials with well coordination of suitable development (Kankam et al., 2015).

## METHODOLOGY

The study adopted a quasi-experimental, pre-test, post-test, non-equivalent, control groups design.. The study area is north eastern part of Nigeria comprises of Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe states. The North eastern part of Nigeria has total 171 nomadic schools across the regions, with estimated 53,509 pupils. The study purposively sampled 376 primary IV pupils found in the intact classrooms across 12 schools based on two schools per state. One school serve as experimental group while other served as control group. Therefore, six schools were taught social studies using improvised instructional materials (experimental group) while remaining six schools were taught social studies without instructional materials (control group). The instruments for data collection were the Social Studies Attitude Inventory (SSAI) and Social Studies Achievement Test (SSAT). The SSAI was adapted and modified from

Attitude Scale (AS) designed by Aiken and Aiken (1969) before improved on by Ahlgren and Walberg (1973). The scale comprised of 40 items, based on a five- point Likert scale. The Social Studies Achievement Test was a multiple choice objective test which consists of 30 items covered five aspect teach in first and second terms of primary five social studies curriculum. The instruments were administered before and after experiment and data were analysed using Analysis of covariance (ANCOVA) at 0.05 significance level.

## RESULTS

**H<sub>01</sub>:** There is no significant difference in the achievement of nomadic pupils in social studies when taught using improvised instructional materials and those without instructional materials in north eastern part of Nigeria.

**Table 5: ANCOVA Summary of Achievement Scores of Nomadic Pupils Taught Social Studies Using Improvised Instructional Materials and those without Instructional Materials**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	16623.30 <sup>a</sup>	2	8311.65	37.67	0.00	0.22
Intercept	48529.48	1	48529.48	219.93	0.00	0.46
Pre-test (Achievement Score)	5334.85	1	5334.85	24.18	0.00	0.09
Group	10865.39	1	10865.39	49.24	0.00	0.16
Error	56047.87	254	220.66			
Total	687667.39	257				
Corrected Total	72671.17	256				

Dependent Variable: Post-test (Achievement Score),

a. R Squared = .229 (Adjusted R Squared = .223)

**Table 1** presents one-way ANCOVA results on differences in the academic achievement of nomadic pupils in social studies when taught using improvised instructional materials and those taught without instructional materials. The Table reveals the  $F(1, 256) = 49.24$  at  $p = 0.00$ . Thus,  $F(49.24)$  is significant, since  $P_{\text{calculated}} (0.00)$



$< P_{\text{hypothetical}} (0.05)$ . The null hypothesis is therefore rejected. This implies that there is a significant effect of using improvised instructional materials on the post-test mean scores of nomadic pupils taught social studies when using instructional materials and those taught without instructional materials. More so, the Eta-squared (0.16) was reported on the table. This indicated that about 16% of academic achievement noticed at post-test between the two group of nomadic pupils was contributed due to the use of improvised instructional materials.

**H<sub>02</sub>:** There is no significant difference between mean achievement scores of male and female nomadic pupils in social studies when taught using improvised instructional materials.

**Table 2: Summary of ANCOVA for Achievement Scores of Male and Female Nomadic Pupils in Social Studies, Taught Using Improvised Instructional Materials**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1154.56 <sup>a</sup>	2	577.28	2.51	0.09	0.041
Intercept	36800.01	1	36800.01	159.82	0.00	0.579
Pre-Test (Achievement Score)	1151.04	1	1151.04	5.00	0.03	0.041
Group	2.42	1	2.42	0.010	0.92	0.000
Error	26709.85	116	230.26			
Total	401783.59	119				
Corrected Total	27864.42	118				

Dependent Variable: Post-Test (Achievement Score)

a. R Squared = .041 (Adjusted R Squared = .025)

**Table 2** presents one-way ANCOVA results on the effect of improvised instructional materials on achievement scores for male and female nomadic pupils in social studies in north eastern part of Nigeria. The table reveals  $F(1, 118) = 0.01$  at  $p = 0.92$ . Thus,  $F(0.010)$  is not significant, since  $P_{\text{calculated}} (0.92) > P_{\text{hypothetical}} (0.05)$ . Therefore, the null hypothesis is not rejected. This implies that there is no significant difference in the effect of improvised instructional materials on the post-test mean achievement scores for male and female nomadic pupils in social studies.

**H<sub>03</sub>:** There is no significant difference in the attitude of nomadic pupils toward social studies when taught using improvised instructional materials and those without instructional materials in nomadic schools in north eastern Nigeria

**Table 3:** ANCOVA Summary of Attitude Scores of Nomadic Pupils Taught Social Studies Using Improvised Instructional Materials and those Taught Without Instructional Materials

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	70.327 <sup>a</sup>	2	35.16	84.82	0.000	0.40
Intercept	205.92	1	205.92	496.70	0.000	0.66
Pre-Test (Attitude score)	13.58	1	13.58	32.76	0.000	0.11
Group	57.06	1	57.06	137.65	0.000	0.35
Error	105.30	254	0.42			
Total	2744.71	257				
Corrected Total	175.63	256				

Dependent Variable: Post Test (Attitude score)

a. R Squared = .400 (Adjusted R Squared = .396)

**Table 3** presents one-way ANCOVA results on attitude of nomadic pupils when taught social studies using improvised instructional materials and taught without instructional materials. The table reveals the  $F(1, 256) = 137.65$  at  $p = 0.00$ . Thus,  $F(137.65)$  is significant, since  $P_{\text{calculated}} (0.00) < P_{\text{hypothetical}} (0.05)$ . The null hypothesis is therefore rejected. This implies that there is a significant effect of improvised instructional materials on the post-test mean attitude scores of nomadic pupils taught social studies than those taught without instructional materials. More so, the Eta-squared (0.35) was reported. This indicated that about 35% of positive attitude to social studies noticed at post-test between the two groups of pupils was contributed due by use of improvised instructional materials.

H<sub>04</sub>: There is no significant difference in the mean attitude of male and female nomadic pupils of toward social studies when taught using improvised instructional materials

**Table 4: Summary of ANCOVA on Attitude Scores of Male and Female Nomadic Pupils to Social Studies when Taught Using Improvised Instructional Materials**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared	Eta
Corrected Model	1.412 <sup>a</sup>	2	.706	1.51	0.23	0.03	
Intercept	181.28	1	181.28	386.69	0.00	0.77	
Pre-Test (Attitude score)	0.083	1	0.08	0.18	0.67	0.02	
Group	1.21	1	1.21	2.59	0.11	0.02	
Error	54.38	116	0.469				
Total	1656.61	119					
Corrected Total	55.791	118					

Dependent Variable: Post-Test (Attitude score)

a. R Squared = .025 (Adjusted R Squared = .008)

**Table 4** presents summary of one-way ANCOVA results on the effect of improvised instructional materials on the attitude of male and female nomadic pupils to social studies in North eastern part of Nigeria. The table reveals  $F(1, 118) = 2.59$  at  $p = 0.11$ . Thus,  $F(2.59)$  is not significant, since  $P_{\text{calculated}} (0.110) > P_{\text{hypothetical}} (0.05)$ . Therefore, the null hypothesis is not rejected. This implies that there is no significant difference in the effect of improvised instructional materials on the attitude of male and female nomadic pupils to social studies in north eastern Nigeria.

## DISCUSSION OF FINDINGS

The findings from this study showed that nomadic pupils taught social studies using improvised instructional materials had better mean score which was significantly difference than those taught without instructional materials. The enhanced in performances of those nomadic pupils taught using improvised instructional materials

may not be unconnected with the fact that pupils in such classroom are likely to show more interest in the learning as their being exposed to something from their history. This agrees with the finding earlier made by Umađi (2012) that improvisation of instructional materials from local sources enhanced the students' performances. Also, this study showed that male nomadic pupils' similar scores like female pupils. This could be an indication that both gender of nomadic pupils benefitted similarly from the use of improvised instructional materials for teaching social studies. This concurs with the earlier finding by Awhen et al. (2014) that showed that male and female gain significantly when taught using locally improvised materials that had relationship with student background. A non-gender biased effectiveness of the indigenous materials as revealed by this study agreed with the conclusion earlier drawn by Dahar and Faize (2011), that education is not meant for a particular gender and thus it is difficult to establish any reason for particular gender to be performing woefully if allowed equal learning opportunity and subjected to the same leaning conditions.

The findings from this study also indicated that those nomadic pupils taught social studies using improvised instructional materials had better mean attitude score difference than those taught without instructional materials. This may not far away from the fact that the presence of improvised materials which linked with pupils' background could create positive interest and positive attitude among pupils and enhanced their contribution toward learning. The current study agreed with the earlier findings by Dahar and Faize (2011), and Aliyu (2014) their studies established that teaching students with something from their background promoted their interested, enhanced their participating in classroom activities as well as overall attitude toward learning. More so, the findings of this study show that male and female nomadic pupils had similar positive attitude to social studies when taught using improvised instructional materials. This finding concurs with the submission made by Aliyu (2014) that attitude of students is not gender-dependent. This implies that male

as well as female students could show positive or negative attitude to learning based on standard of method used for teaching. This also implies that the chances for the male student to be positive when taught using appropriate teaching method is similar to that of female student. This is in line with the argument made by Muhammad (2016) that when there is fair play learning environment and teaching method that recognizes differences in learner's capability, the attitude of students irrespective of their gender is expected to be positive.

## CONCLUSION

The important of instructional materials for teaching social studies to impact positive on attitude and achievement among nomadic pupils in subject such as social studies could not be underestimated. The current study has shown that through instructional materials the nomadic pupils had better mean achievement score than those taught without instructional materials. This shows that the improvised instructional materials for teaching social studies is right way to enhance the nomadic pupils' achievement, when consider their peculiar life style. The current study has also proved that the use of improvised instructional materials could be a best approach to resolve performance difference among nomadic pupils in social studies irrespective of their gender.

## RECOMMENDATIONS

Based on the findings and conclusion from this study, the following are the recommendations:

1. The governments in the north eastern part of Nigeria through their state ministries of should seek further the better ways to improvise and indigenous learning materials for social studies suiting the background and lifestyle of nomad pupils
2. The academic planners for nomadic education in the north eastern Nigeria should have a relook in various locally materials that can enhanced teaching of socials studies in the nomadic schools

3. There should be trained of social studies teachers on how to use improvised instructional materials for teaching social studies pupils in nomadic schools in north eastern part of Nigeria.

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