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Review Article

Instructional Materials as Correlates of Secondary School Students Performance in Geography in Gombi Local Government Area of Adamawa State, Nigeria

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ABSTRACT: ***This study was designed to assess instructional materials as Correlates of Secondary School Students Performance in Geography in Gombi LGA of Adamawa State, Nigeria. Two objectives and two hypotheses were raised to guide the conduct of the study. The design for this study was quasi-experimental pre-test, treatment, post-test experimental and control group. The study was conducted in Gombi Local Government of Adamawa State. Gombi Local Government is located in the Northern Senatorial district of Adamawa State. The population of the study consist of all Senior Secondary school students in Public secondary schools in Gombi Local Government of Adamawa State. Due to large number of students in secondary schools in Gombi Local Government of Adamawa State. The researchers randomly select a sample of 100 students from five sampled schools in Gombi Local Government of Adamawa State. The 100 sampled students that were pretested by the researchers and 40 students who scored average marks were selected by the researchers and grouped into two equivalent groups based on their performances in the pre-test. The instruments for the collection of primary data were two tests set by the researchers in geography comprising of 20 multiple choice items each. The first test was a pre-test (given before the experiment) the second test was a posttest given after the treatment. The data collected before and after the experiment were analyzed using the t-test of independent sample. The paper conclude that there are substantial evidences supporting the notion that instructional materials significantly correlates with secondary school students' performance in Geography. Based on the finding it was recommended that: Schools should prioritize funding for acquiring diverse instructional materials that align with curriculum.***

KEYWORDS: ***Instructional Materials, Correlates, Secondary School Students, Performance and Geography.***

INTRODUCTION

Geography is a course that focuses on how the environment affects human activity. It is primarily taught and specialized at the secondary and university level. It seeks to close the growing gap between changing physical and biological phenomena and changing human phenomena (Dhakal, 2017). Geography as a study teaches students to comprehend, master, and use the resources available in their area to carry out various economic activities such as agriculture, fishing, logging, beekeeping, mining, and forestry (Onyango, 2019). Geography is

one of those disciplines that requires enough and proper use of instructional resources; therefore, an adequate supply of such materials ensures that a school is of high quality (Aydin, 2011). Geography, as a secondary school subject, will benefit from the preparation and use of appropriate and relevant instructional resources during teaching and learning (Dhakal, 2014). Shiundu and Omulando (2012) underline the importance of instructional materials in improving students' academic performance in exams, as well as contributing to modern teaching methods and overall educational quality. Heffron and Downs (2012) stressed the relevance of instructional materials in teaching and studying geography in secondary schools, recognizing geography as a dynamic and active field that reflects on learners' daily life.

According to Edelson, Shavelson, and Wertheim (2013), the utilization of instructional resources promotes geographers' creative thinking in terms of challenges, providing models for "thinking geographically" and creating chances for them to exercise this form of thinking. The significance of instructional materials in the teaching of Geography is paramount. Numerous studies have highlighted that the availability and effective utilization of teaching resources positively influence learning outcomes.

Research indicates a strong correlation between the proficient use of instructional materials and students' academic success in Geography. Abdu-Raheem (2016) conducted a study examining the impact of instructional materials on the academic performance of secondary school students in Ekiti State. The findings revealed a notable difference between the pre-test and post-test results of students, attributed to the enhanced performance of those in the experimental group. Additionally, a study by Okwuosa & Eze (2020) investigated the impact of instructional materials on students' performance in Geography at the senior secondary level. The results demonstrated a statistically significant difference in mean scores between students who were taught Geography using instructional materials and those who were not. In light of these findings, this study aims to evaluate instructional materials as correlates of secondary school students' performance in Geography in Gombi LGA of Adamawa State, Nigeria.

PURPOSE OF THE STUDY

The main purpose of this study is to assess instructional materials as Correlates of Secondary School Students Performance in Geography in Gombi LGA of Adamawa State, Nigeria. Specifically, the study sought to:

i. Determine the difference between the mean scores of students in Geography pre-test and post-test.
ii. Determine the difference between the mean score of senior secondary school students' taught Geography with instructional materials and those taught without instructional materials.

RESEARCH HYPOTHESIS

Two research hypotheses were formulated for this study and they will be tested at 0.05 level of significance.

HO1: There is no significant difference between the mean scores of students in Geography pre-test and posttest.

HO2: There is no significant difference between the mean score of senior secondary school students' taught Geography with instructional materials and those taught without instructional materials.

RESEARCH METHODOLOGY

The design for this study was quasi-experimental pre-test, treatment, post-test experimental and control group. The purpose of using this design is because experimental is always designed to investigate possible cause and effect as well as the relationship between two or more variables by the application of treatment which cannot be resolved by observation or description. The experimental and control groups were pre tested to determine the group equivalence at the start of the experimental. The illustration of the design can be seen below.

Experimental Group: 01 ……X……..02

Control Group: 01 …… Y…….02

Figure 1: Research Design Illustration

KEY:

Q1: Pre-test

Q2: Post-test

X: Treatment Group (taught with Instructional Materials)

Y: Control Group (taught without Instructional Materials)

The study was conducted in Gombi Local Government of Adamawa State. Gombi Local Government is located in the Northern Senatorial district of Adamawa State. The population of the study consist of all Senior Secondary school students in Public secondary schools in Gombi Local Government of Adamawa State. Due to large number of students in secondary schools in Gombi Local Government of Adamawa State. The researchers randomly select a sample of 100 students from five sampled schools in Gombi Local Government of Adamawa State. The 100 sampled students that were pretested by the researchers and 40 students who scored average marks were selected by the researchers and grouped into two equivalent groups based on their performances in the pre-test. Each of the groups will be a mixture of Male and female students. The instruments for the collection of secondary data were the text books and information from articles and the internet, while the primary data were collected through test. Two tests were set by the researchers in geography comprising of 20 multiple choice items each. The first test was a pre-test (given before the experiment) the second test was a posttest given after the treatment. The data collected before and after the experiment were analyzed using the t-test of independent sample.

RESULTS AND DISCUSSION

Testing the Hypotheses

HO1: There is no significant difference between the mean scores for pre-test and posttest.

Table 1: Summary Table for Testing HO_1

	Pre test		**Post test**
Mean	26.125		43.5
Variance	91.8594		224
Stand. Dev.	9.5843		14.9666
n	40		40
t		**-6.1831**	
d.o.f		**66**	
critical value		**1.994**	

From the t-test summary in table one above it is clear that the calculated t-value of 6.1831 exceed the critical-value of 1.994 which indicates that using the two tail test, the calculated t- will fall within the rejection region. Meaning that hypotheses one which states that there is no significant difference between the mean scores for pre-test and posttest is rejected. This means that there is a significant difference between the mean scores for pre-test and post-test.

HO2: There is no significant difference between the mean score of senior secondary school students' taught Geography with instructional materials and those taught without instructional materials.

Table 2: Summary Table for Testing HO_2

	With Audio-Visual	Without Audio-visual
Mean	56.25	30.75
Variance	87.1875	35.6875
Stand. Dev.	9.3374	5.9739
n	20	20
t	**10.2877**	
d.o.f	**32**	
critical value	**2.037**	

From the summary of the t-test analysis in table two above it is clear that the calculated t-value of 10.2877 is greater than the critical-value of 2.037 which indicates that using the two tail test, the calculated t- will fall within the rejection region. Meaning that hypotheses two which states that: There is no significant difference between the mean score of senior secondary school students' taught Geography with instructional materials and those taught without instructional materials is rejected. This means that there is a significant difference between the mean score of senior secondary school students' taught Geography with instructional materials and those taught without instructional materials.

SUMMARY OF THE FINDINGS

From the above results in table one and two the study revealed that:

1. There is a significant difference between the mean scores for pre-test and posttest.
2. There is a significant difference between the mean score of senior secondary school students' taught Geography with instructional materials and those taught without instructional materials.

DISCUSSION OF THE FINDINGS

From the findings in table one, it is clear that is a significant difference between the mean scores for pre-test and posttest. This means that the mean scores of the students pre-test and posttest varied significantly. This finding agreed with the findings of Abdu-Raheem (2016) which found that there was a general significant difference in the pre-test and post-test of students. This however is as a result of the increased in performance of the student in the experimental group.

Additionally, the findings in table two revealed is a significant difference between the mean score of senior secondary school students' taught Geography with instructional materials and those taught without instructional materials. This finding agreed with the findings of Okwuosa & Eze (2020) which indicated a statistically significant difference in mean scores between

students' taught Geography with instructional materials and those taught without instructional materials.

CONCLUSION

In conclusion, there are substantial evidences supporting the notion that instructional materials significantly correlates with secondary school students' performance in Geography. To maximize the benefits of instructional materials in Geography the following recommendations were made:

1. Schools should prioritize funding for acquiring diverse instructional materials that align with curriculum objectives.
2. Teachers should also be encouraged to improvise instructional materials in the absence of replicas, realia, models, and other forms of instructional materials.
3. The government at all levels should ensure that instructional materials of different varieties are provided to secondary schools for the effective teaching and learning of Geography.
4. There is the need to encourage the parents to support their children by giving them the school materials.

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