



Effect of Field-Trip Strategy on achievement in ... Arabi, Y. A. (2026)

Effect of Field-Trip Strategy on Achievement in Geography Concepts among Rural and Urban Secondary School Students in Adamawa State, Nigeria

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Abstract

This study investigated the effect of Field-Trip Strategy on academic performance of geography students among secondary schools of Adamawa State, Nigeria. Two research questions and two hypotheses. The study adopted a quasi-experimental research design with pretest and posttest. The population consisted of 12,366 SS II students, with a sample size of 240 senior secondary school (SSII) students offering geography from four secondary schools. The experimental group was taught using field trip teaching strategy while the control group was taught using lecture method. The instrument for data collection was Geography Achievement Test (GAT), comprising 50 items with a reliability value of 0.71. Research question was answered using descriptive statistics of mean and standard deviation, while hypothesis was tested at 0.05 level of significance using ANCOVA. The study shows that school location has significant effect on students' academic performance $F=481.03(df_{1,239})$, $P \leq 0.05$. Also, there is no significant effect of gender on students' performance in Adamawa state. The study recommends that schools in rural areas should be equipped with furniture, teachers and facilities to facilitate students' academic performance. Geography teaching and learning should encouraged students' participation in field trips in secondary schools.

Keywords: Field trip, Rural and Urban locations, Academic performance, Gender

Introduction

The rural-urban location has been found all over the world to be an important indicator of differences in performance among students. School location in rural environments attain lower scores when compared to their urban counterparts (Dennis, 2012). The location of a school plays a significant role in the academic achievement of students. Akinyele (2012) stated that the immediate environment of a child plays a major role in his socialization and the area in which a school is located may affect their academic achievement. Akpan (2016) further stated that school location is one of the major factors that affect students' academic achievements. According to Orji (2016) indicated that school location refers to rural and urban schools. A school located in a rural area is usually faced with problems such as shortage of teachers, lack of laboratories, poorly equipped laboratories, among others. These shortcomings negatively affect both students' interest, motivation and achievement. Evidence revealed that the educational aspirations of students who study in rural areas are weaker than those of their urban counterparts (Hum, 2013; Arnold, 2015). Dennis (2019) found that schools in the rural environment achieve lower scores when compared to their urban counterparts. Similarly, Macmillan (2012) found that students in rural areas put less value in their studies, and as such, their achievements are affected. Urban schools are those in municipalities or towns, while rural schools are located in villages or semi-urban areas. Frederick (2015) views school location as one of the major factors that influence students' academic achievement in some subject areas. Many parents consider factors such as the location of schools (urban or rural) and the distance to the school before enrolling their wards. Owuoye and Yara (2016) noted that many parents prefer their children to attend schools in urban areas because they believe that students from urban schools perform better than their counterparts from rural schools.

Statement of the Problem

Geography is taught with the objective that learners will acquire basic foundation skills on their physical environment to propel them towards making valuable contributions to society. However, it was observed by Amasun (2008), Sanlera (2016), and WAEC chief examiners' reports (2018) that the poor performance of students in both internal and external examinations in recent times is high. This ugly trend might have resulted from a lack of qualified teachers, curriculum issues, school location, and method of teaching used by geography teachers. Rural-urban location has been found worldwide to be an important indicator of differences in education performance. It has become necessary to conduct a study on the effect of school location on students' academic performance in geography.



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Purpose of the Study

The study was guided by the following objective:

1. To determine the effect of Field-Trip Strategy on academic performance in Geography Concepts among secondary school student in Adamawa state.
2. To determine the effect of Field-Trip Strategy on academic performance in Geography Concepts among secondary school male and female students in Yola.

Research Question

1. What is the pretest and posttest mean score of students taught geography concepts using field trip strategy and those taught using conventional lecture methods on school location in Adamawa state?
2. What is the pretest and posttest mean score of students taught using teaching methods based on gender in Adamawa state?

Hypothesis

H₀₁: There is no significant effect of school location on students taught geography concept using field trip in Adamawa state.

H₀₂: There is no significant effect of field-trip teaching methods on student academic performance in geography Concept based on gender.

Concept of School Location

The concept of school location refers to schools that are located in rural or urban areas. Urban schools are those in the municipalities or schools found within the towns, and rural schools are those located in the villages or semi-urban areas. Frederick (2015) views that many parents consider factors such as the location of schools (urban or rural) and the distance to the school before enrolling their wards. Orji (2017) explained that many students in the interior villages struggle with the challenge of walking long distances to school. The implication is that when people in urban areas convey their children to school by vehicle and enjoy minimum traveling distances to acquire education, others in rural places suffer by having to cover maximum distances to acquire education. This implies that school location may contributed significantly to students' poor achievement.

Research Methodology

This study adopted a quasi-experimental pre-test, post-test non-equivalent control group design. This is because there was non-randomization of students to the groups. Similarly, secondary school classes exist as intact group, and school authorities do not allow any attempt to dismantle and reconstitute them for the purpose of research. The design can be presented symbolically as:

EG $O_1 \rightarrow X_1 \rightarrow O_2$
 CG $O_1 \rightarrow X_0 \rightarrow O_2$

The study use two groups experimental and control. The experimental group (EG) was taught using fieldtrip teaching strategy (X₁) while the control group (CG) was taught using lecture method (X₀). The two groups (experimental and control) were given a pre-test (O₁) to determine the entry level of students. The two groups were taught geography concept for a period of six weeks. Then post-test (O₂) were administered to the groups in order to determine the impact of teaching methods on students performance in senior secondary schools in Adamawa State, Nigeria. The study was conducted in Adamawa State, Nigeria. A total of 12,366 SSII students in senior secondary schools offering geography in Adamawa State. The sample for the study consisted of 240 SSII geography students from four senior secondary schools in Gombi Local Government Area. The schools were Government Day Secondary School Gombi, Government Day Secondary School Gaanda, Government Secondary School Gombi, and Government Day Secondary School Muchala. One intact class was chosen randomly from each school. Purposive sampling technique was used to select co-educational, mixed schools in rural and urban areas. The instrument for data collection was a performance test tagged "Geography Achievement Test (GAT)". The GAT is a 50-item multiple-choice objective test with four options. The instrument was adapted from past West African Examination Council (WAEC) examination questions from 2015 to 2022 and was validated. Split-half reliability method was used for reliability. The data collected were correlated using Pearson Moment Correlation Coefficient to obtain half reliability coefficient, and Spearman Brown Prophecy formula was used and the index of 0.71 was obtained.

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The study was conducted in six weeks. The pre-test was administered in the first week to both the experimental and control groups. The experimental group was exposed to treatment through field trip teaching strategy while the control group was taught through the conventional lecture method. The topics taught were Weathering, Soil Erosion, and Settlement. Posttest was administered to both groups after six weeks of instruction. The research questions were answered using descriptive statistics of mean and standard deviation, while the hypotheses were tested at 0.05 level of significance using ANCOVA.

Presentation of Results

Research Question 1: What is the pretest and posttest mean score of students taught geography concepts using field trip based on school location in Adamawa state?

Table 1: Mean and Standard Deviation of pretest and posttest mean score of students taught geography using field trip method based on school location in Adamawa state

School Location	n	Pretest Mean	SD	Posttest Mean	SD	Mean Diff
Rural	129	10.64	2.97	45.82	2.50	35.18
Urban	111	11.32	2.82	45.54	2.38	34.22

The descriptive statistics in Table 1 revealed that rural schools with 129 students had a pretest mean score of 10.64 and standard deviation of 2.97. In the posttest, the rural students had a slightly higher mean score of 45.82 with a standard deviation of 2.50. Urban schools with 111 students had a mean score of 11.32 and standard deviation of 2.82 at pretest level and mean score of 45.54 with standard deviation of 2.38 at posttest level. In summary, the mean difference between rural and urban students is slightly equal, which means rural and urban students performed almost equally, subject to confirmation by testing the corresponding hypothesis.

Research Question 2. What is the pretest and posttest mean score of students taught using Field-Trip teaching methods based on gender in Adamawa state?

Table 2. Mean and Standard Deviation of pretest and posttest mean score of students taught using Field-Trip teaching methods based on gender in Adamawa state.

Gender	N	Pretest		Posttest		Mean difference
		Mean	S.D	Mean	SD	
Male	128	3.15	10.76	45.51	2.47	0.38
Female	112	11.12	2.63	45.89	2.41	

Table 2 indicated that, 128 male students had a pretest mean score of 10.76 with standard deviation of 3.15. In the posttest, the male students have highest mean score of 45.51 with a standard deviation of 2.47. while 112 female students had a mean score of 11.13 and standard deviation of 2.63 at pretest. While mean score of 45.89 with standard deviation of 2.63 at posttest. The mean difference between of male and female students is 0.38 in favor of female students.

Testing of Hypotheses

H₀₁: There is no significant effect of school location on students taught geography concept using field trip in Adamawa state.

Table 3: ANCOVA on main effect of school location on students' performance in Adamawa state

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Eta
Corrected Model	12.124 ^a	2	6.062	1.012	.000	.718	
Intercept	31668.589	1	31668.589	5289.038	.000	.957	
PRETEST	7.408	1	7.408	1.237	.188	.005	
SCHOOL_LOCATION	6.183	1	6.183	481.033	.000	.724	
Error	1419.059	237	5.988				
Total	502486.000	240					
Corrected Total	1431.183	239					

a. R Squared = .008 (Adjusted R Squared = .000)

The results of the analysis in Table 3 show that there is a significant effect of school location on students' performance in Adamawa state $F = 481.03$ (df 1, 239), $P = 0.000$. Since the computed p-value (0.000) is less than 0.05 level of significance, the null hypothesis is rejected, and it is concluded that there is a significant effect of school location on students' performance in Adamawa state. The partial eta square of 0.724 indicates that 72% of students' performance in this study was as a result of differences in school location.

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H0₂: There is no significant effect of field-trip teaching methods on student academic performance in geography Concept based on gender.

Table 4. ANCOVA on main effect of gender on students' performance in Adamawa state.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	13.583 ^a	2	6.792	1.135	.323	.009
Intercept	32268.621	1	32268.621	5394.796	.000	.958
PRETEST	5.083	1	5.083	.850	.358	.004
GENDER	7.642	1	7.642	1.278	.259	.005
Error	1417.600	237	5.981			
Total	502486.000	240				
Corrected Total	1431.183	239				

a. R Squared = .009 (Adjusted R Squared = .001)

Table 4 shows that, there is no significant effect of gender on students' performance in Adamawa state $F = 1.28$ (df 1, 239), $P = 0.259$. Since the computed p-value (0.259) is greater than 0.05 level of significant, therefore, the null hypothesis of no significant difference is upheld, and concluded that there is no significant effect of gender on students' performance in Adamawa state. The partial eta square of 0.005 indicates that, 0.5% of students' performance in this study was as result of difference in gender.

Discussion of Findings

The study revealed that there is a significant effect of school location on students' academic performance in Adamawa state. This finding is supported by Considine and Zappaa (2016) who found that geographical location does not significantly predict the outcomes in students' performance in schools. Similarly, Philiat (2016) has proven that students in urban areas had better academic achievement than their rural counterparts and also performed equally as well. In the same vein, Frederick (2016) observed a significant difference in urban-rural performance and that location exerted some significant measure of influence on students' achievement in Agricultural Science Achievement Test (ASAT). Giving credence to the above, Owioye and Yara (2016) found a significant difference in the academic achievement of students in urban and rural areas in senior school certificate examinations in Ekiti State. This implies that students in urban areas had better academic achievement than their rural counterparts. On the contrary, Precisely, Onuoha (2017) found that there is no significant difference between students' academic achievement in rural and urban areas. Considine and Zappaa (2016) found out that geographical location does not significantly predict outcomes in school performance. This implies that students location influences their academic achievement. The study also found that there is no significant effect of gender on students' performance in Adamawa state. This study agreed with Chinedu (2018) who revealed that gender and location do not have influence on students' level of awareness and attitude. The study implies that gender had no significant effect on students' offering geography when taught using field trip.

Conclusion

School location has significant effect on students' academic performance when taught geography concepts using field trip teaching method. Also, gender has no effect on student academic performance in geography when taught using field trip teaching method.

Recommendations

The following recommendations are made:

1. Geography teaching and learning activities should encourage students' participation in field trips in secondary schools as it is often neglected.
2. The gaps in terms of school location should be filled by supplying enough teachers and facilities.
3. Schools in rural areas should be equipped with furniture, teachers and facilities to facilitate students' academic performance.



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