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EFFECT OF FIELD TRIP ON GEOGRAPHY STUDENTS' ACADEMIC PERFORMANCE IN SECONDARY SCHOOLS IN ADAMAWA STATE, NIGERIA

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ABSTRACT

This study was carried out to investigate the effect of field trips on geography students' academic performance in secondary schools in Adamawa State, Nigeria. A pretest-posttest quasi-experimental research design was adopted for the study. The population of the study consisted of 12,366 SS II students in the state. A purposive sampling technique was used to select 240 students from two intact classes in two secondary schools in the state. The schools were randomly assigned to experimental and control groups, the experimental group was taught using a field trip teaching strategy while the control group was taught using the conventional lecture method for eight weeks. The instrument used for data collection was the Geography Achievement test GAT which composes of 35 items with a reliability value of 0.71. Research questions were answered using descriptive statistics while hypotheses were tested at a 0.05 level of significance using ANCOVA. The finding of the study revealed that the Field Trip teaching strategy is highly effective in improving students' academic performance. From the result the study recommendations were made there is a need for teaching and learning involving student participation such as field trip teaching strategy which enhances learning.

KEYWORDS: Field trip, Students, Geography

INTRODUCTION

Science as a branch of knowledge is the systematic study of things around us. Eneh (2012) opined that the totality of knowledge obtained from such study constitutes scientific knowledge. The basic understanding of the universe and its content comes from science. Nwagbo (2016) defined science as an intellectual activity carried out by humans, designed to discover information about the natural world and to discover the ways in which this information can be organized to benefits human race. Science is also seen as complex human activities that leads to the production of a body of universal statement, called laws, theories or hypotheses which serve to explain the observable behavior of the universe or part of it which in themselves have predictive characteristics (Shaibu, 2018). In addition, science deals with nature, by observing it and letter subject observed phenomena to experimental investigation (Anaso, 2018). In science education students are exposed to several methods of teaching and learning of science. These include lecture method, demonstration, discussion, laboratory activities, and



learning few to be mentioned, depending on the aspect one wants to teach. Usman (2018) defines science as to consist of specific branch of a general body of knowledge such as biology, chemistry, physics, geography, astronomy to mention but a few. These definitions indicate that science is an organized body of knowledge and a way of thinking in order to understand and explain natural phenomena. The planet earth is one of the major dwelling places for man among the other eight planet numerous activities and interactions have some influence to understand these, one has to understand his environment Usman (2018).

Geography as a subject has been subjected to many definitional approaches by various authorities. The word Geo is derived from a Greek word which means, to write about the earth; and Geography means science about. On the whole when combined, it means the science about the earth surface (Minshull, 2012). Presenting a more comprehensive definition of geography, Buchanan (2012) posits that geography is the study of the diverse features on the earth surface, such as: its relief; climate, vegetation, soils; economic resources their description, development and distribution, and their interaction with man. Buchanan maintains that geography draws widely from the natural and social sciences, leading to the integration of many disciplines, both in their concepts and contents.

Expanding on the horizon of subject, Taylor and Francis (2015) state that geography is more than describing foreign places or an attempt of memorizing the names of capitals and countries but an encompassing discipline that seeks to understand the world and its human and physical features through an understanding of place and location.

Perceive geography as the spatial connection between people, places and the earth. An analysis of the various definitions portrays certain basic conceptions and values inherent in geography as it deals with the earth, the law of nature, area differentiation, and spatial relationships. Relevance of Geography Education to National Development. The value of geography is embedded in two of the national objectives as stated in the National Policy on Education (FRN, 2013) thus:

- i. The training of the mind in the understanding of the world around, and
- ii. The acquisition of appropriate skills, abilities and competences, both mental and physical, as equipment of the individual to live and contribute to the development of his society. The national objectives stated above can be accomplished using the tools of geography, which has diverse ways of exploring the environment and its people. Geography does this by creating opportunities for exploring the different people of the world, their human activities and adjustments on the earth surface. Based on the national objectives of education, Nigeria Education, Research and Development Council (NERDC) (FRN, 2013) developed the geography curriculum and enlists its objectives thus; to:



- i. Understand the concept of main environment relations;
- ii. Appreciate and develop a sense of responsibility towards one's own society.
- iii. Formation of national goals and policies, especially as they influence the different resources and regions of the area;
- iv. Develop sympathetic understanding of the people of other lands;
- v. Organize and formulate principles according to acquired geographic concepts, which they can use to analyze and interpret spatial problems in their immediate and wider environment.

Discussing the content of geography objectives as laid down by NERDC. Okpala (2013) observes that geography is perceived as a versatile, expressive, creative, problem solving, practical and intellectually stimulating school subject. Supporting these assertions about geography, Gopsill (2014) advises on its proper teaching. He makes it clear that geography teaching is important as it deals with training of citizens and future leaders, to imagine accurately, the conditions of the great world stage.

Geography as a discipline is worthwhile for the development of any society. Its worth stems from its focus on the development of an individual, who will in turn, develop the entire society. Onyige (2013) re-echoing the words of Ejiogu emphasizes that geography is important in our education system, and fundamental to our society. He makes it clear that nobody in any sphere of life can operate comfortably without some knowledge of geography. As an applied science, geography is expected to reflect in the learners' behaviours, as they utilize their knowledge to solve problems in their environment (Adinna, 2014). However, despite the importance of geography it has been observed that's there is a poor performance of students in both internal and external examinations.

The underachievement of students in geography over the years has necessitated a series of workshop for secondary school geography teachers organized by the inspectorate Division of the Ministry of Education. Geography is one of the activity-based school subjects. The effectiveness of teaching in school can be measured by examining the method of teaching applied by teacher and the achievement of students in the school examination. In the measurement of students' academic achievement in geography as a school subject, various tasks are undertaken within and outside the classroom, the effectiveness of these activities lie in the instructional methods used by the teacher. For the students of geography to achieve the best in the subject, teachers are expected to organize field visitation (field trip). Educational visits may be organized to suitable places where fundamental concepts, ecological process or events treated in the classroom become clearer to the students with great comprehension. This is because, fieldtrips generally appeal to the sense of sight, touch and hearing. Organized visits to the river side or any geographical phenomenon make the students to see in practical what was theoretically explained and learnt by them in the classroom. Fieldtrip is an outing by the students to educational places of interest outside the classroom under the guidance of a teacher or an instructor



for the purpose of getting first-hand information on people, places and things for the purpose of achieving permanency of learning experience.

Fieldtrip strategy is a method of teaching which helps to bring about an effective leaning of geography. Fieldtrip is far from just dishing out points to students as in traditional lecture method, where the teacher simply becomes the expositor and drill master while the learner remains the listener and a store house of facts that can be retrieved when a student hears his name called by the teacher (Gopsill, 2014)). This is not to say that the traditional lecture method is completely unproductive but there exists a difference between them. Fieldtrip is activity-based which offers opportunity for learners to get first-hand information on people, places and things in order to concretize their learning experience.

A Study trip taken outside the classroom to obtain direct experience from the natural setting and to improve students' interest in learning for collecting data, materials or objects classroom as well as to observe objects or phenomena not possible to bring within the classroom. During fieldtrips, the entire class visits a point of instructional interest such as Museum, factory, Hill Mountain, inselbergs valleys, river side etc. Fieldtrip is an outdoor or fieldwork or learning exercise undertaken by the teacher and the students in certain aspect of subject, particularly in geography so as to give the students the opportunity to acquire knowledge. It is a trip arranged by the school and undertaken for educational purpose in which the students go to places where the concepts for instruction may be observed and studied directly in their functional setting.

The Poor academic performance of student in all science subject geography in particular research as reported by (Mohanty, 2016). This has also been observed by high rate of failure in public examination in Nigeria. External examiners report of West African examination council (WAEC) and national examination council (NECO) for may show that the student performed poorly in geography (Mohenty, 2016). Studies have also shown a decline in student performance in science and geography and this has been attributed to the fact that strategies of teaching used in classrooms are not very effective (Bichi, 2012)). Student academic performance is being used as one of the predictors of overall quality of education system. To this end, Usman (2018) stated that the quality of education that teachers provide to students is dependent upon what the teachers do in the classroom Sanlera (2016) pointed out that despite the existence of learning theories (detailing how people lean), most teacher still dispense information using governmental methods without regard to students learning activities. The Poor performance in Geography among Nigerian secondary school students has been the major concern of parents, teachers and general public. Jibrin and Nuru (2017) independently identified poor methods of teaching and improper use of instructional materials as some of the deficiencies of science teachers.



Okebukola (2014) also attributed the poor achievement in Geography to the use of ineffective teaching and learning strategies and lack of appropriate learning environment under which Geography teaching takes place. Research studies shown that several factors such as anxiety, Lack of motivation, school location, poor methods of teaching, family background, school/classroom environment, peer group, over-loaded Geography syllabus, difficulty of topic and some concept as well as absence of dedication and resourcefulness on the part of the teachers among others were found to be some of the reasons why the academic performance of Senior Secondary School students fall below (Vogel and Collins, 2012).

One of the common methods of teaching science at secondary school level is lecture method. Bichi (2012), it is the method of teaching that emphasizes talk and chalk in teaching of science subjects. More than 80% of the scientific information and principles are delivered through lecture. Obeka (2019) described lecture method as a teacher-centered method. He further said that the method comprises the acquisition of subject matter usually by memorization and close supervision of the students by the teacher. However, teachers embraced this method for easy coverage of school syllabus. It is characterized by one way flow of information from the teacher who is always active, to the students who are always passive. Usman (2018) opined that the use of lecture method in science teaching lead to rote learning, and essential part of it will be missing. The use of lecture method alone by teachers creates a lot of tension among students because often little or no room is given to students to express their areas of difficulties either by way of asking questions or contributing to the progress of the lesson. This situation leads to restlessness, frustration and anxiety which impair students learning (Geddes & Grosse 2017). Any teaching method that will help students to develop scientific attitude and skills will also help the students to achieve high in science (Millan, 2015).

Statement of the Problem

The subject geography is taught with the objective that learners will acquire basic foundation skills on their physical environment so as to propel them towards making valuable contributions to the society. These contributions can be made through the acquisition of basic foundation skills as well as in the world of work. However, it has observed by Amasun 2008, Sanlera 2016 and WAEC chief examiners report 2018 that there is poor performance of students in both internal and external examinations in recent times is a matter of concern; many suggested that this ugly trend might have been as a result of lack of qualify teachers, the curriculum, school location, method of teaching used by geography teacher, because a good learning is a product of a good method of teaching. Student academic performance is being used as one of the predictors of overall quality of education system. To this end, Amosum (2018) stated that the quality of education that teachers provide to students dependent upon what the teachers do in the classroom. Sanlera (2016) pointed out that despite the existence of learning theories (detailing how people learn), most teacher still dispense information using conventional



methods without regard to students learning outcomes.

Teachers use conventional method which are theoretical didactic and teacher-centered, instead of experimentally or activity-based methods. In line of the above-mentioned problems, it has become necessary to conduct a study on the field-trip teaching strategy for improving student performance. This study therefore, sought to examine the effects field trip on Students performance in Adamawa State, Nigeria.

Purpose of the Study

- i. To determine the effect of field trip on secondary school students' academic performance in geography in Adamawa state.

Research Questions

- What is the pretest and posttest mean scores of students taught geography concept using field trip strategy and conventional lecture methods in Adamawa state?

Hypothesis of the Study

The following hypothesis guided the study and tested at 0.05 level of significance.

H₀₁: There is no significant effect of students taught geography concept using field trip strategy and those taught using conventional method in Adamawa state.

METHODOLOGY

This study adopted quasi-experimental pre-test, post-test non-equivalent control group design. This is because there was non-randomization of students to the groups. As a rule, when any of the research procedures required in true experimental condition is absent, the design is best be described as quasi-experimental design. The study was conducted in Adamawa State, Nigeria.

A total of 12,366 SSII students in senior secondary schools offering geography in Adamawa state (Adamawa State Post Primary Schools Management Board, 2022). The sample for the study consisted of 240 SSII geography students from four senior secondary schools in Gombi Local Government Area.

The instrument for data collection was performance test tagged Geography Achievement Test (GAT) The GAT is a 35-items multiple-choice objective test items with four options. The tool is adapted from pass West African Examination Council (WAEC) examination Past questions from 2015 to 2022. The items covered six cognitive domains of educational objectives developed by Benjamin Bloom, otherwise known as Blooms taxonomy of educational objectives. Knowledge took 25% of the items, comprehension 25%, application 15%, analysis 15%, synthesis 10%, while evaluation made 10%. The test items were administered to non-participating school in the study area (Government Day Secondary

School, Sangere Futy), who have educationally similar background, offering geography as a subject. Split-half reliability method was used. In the split-half approach to reliability, the responses was divided into odd and even number. The data collected was correlated using Pearson Moment Correlation Coefficient to obtain half reliability coefficient. The reliability index of 0.71 was obtained which is a good reliability index.

The study involved two main stages, which were administration of pre-test and post-test that contained the same questions arranged in different order. The study was conducted in six (6) weeks. The pre-test was administered in the first week of the research exercise to both the experimental and control groups before the experimental groups was subjected to treatments. The purposes of the pretest are to ascertain students' entry behavior on the topics to be taught, control selection bias, to ascertain that the groups are equivalent at the beginning of the experiment and also to control extraneous variable that came as a result of selection maturation.

The research questions was answered using descriptive statistics of mean and standard division while, the hypotheses was tested at 0.05 level of significance using ANCOVA.

RESULTS AND DISCUSSION

Research Question. What is the pretest and posttest mean scores of students using field trip method and lecture methods in Adamawa state?

Table 1. Mean and Standard Deviation of pretest and posttest mean scores of students using field trip method and lecture methods in Adamawa state.

Teaching Method	n	Pretest		Posttest	
		Mean	SD	Mean	SD
Field Trip	122	10.99	2.83	47.71	0.98
Lecture	118	10.87	3.03	43.60	1.60

The descriptive statistics in Table 1 revealed that, field trip method with 112 students has a pretest mean score of 10.99 and standard deviation of 2.83. In the posttest, the field trip method has the highest mean score of 47.71 with a standard deviation of 0.98. The lecture method has 118 students with a mean score of 10.87 and standard deviation of 3.03 at pretest level and mean score of 43.60 with standard deviation of 1.60 at posttest level. In summary, the mean difference between pretest and posttest is high which means the instructional methods under study (field trip method and lecture) were equally important at improving students' performance at different levels.

Testing Hypotheses

H0₁: There no significant effect of field trip and lecture methods on secondary school students’ performance in Adamawa state.

Table 2. Ancova of effect of field trip and lecture methods on secondary school students’ performance in Adamawa state.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1017.143 ^a	2	508.572	291.111	.000	.711
Intercept	32562.733	1	32562.733	18639.174	.000	.987
PRETEST	3.198	1	3.198	1.831	.177	.008
INSTRUCTIONAL_METHODS	1011.201	1	1011.201	578.820	.000	.709
Error	414.040	237	1.747			
Total	502486.000	240				
Corrected Total	1431.183	239				

a. R Squared = .711 (Adjusted R Squared = .708)

The results of the analysis in Table 2 shows that, there is significant effect of field trip on secondary school students’ performance in Adamawa state $F = 578.82$ (df 1, 238), $P = 0.00$. Since the computed p-value (0.00) is less than 0.05 level of significant, therefore, the null hypothesis of no significant effect is rejected, and concluded that their significant effect in the performance scores of students taught geography with field trip and lecture methods in senior secondary schools of Adamawa state in favour of field trip method. The partial eta square of 0.71 indicates that, 71% of students’ performance in this study was as result of field trip.

This study aimed to investigate weather field trip teaching strategy and School location has effect on geography students’ academic performance in secondary schools in Adamawa state, Nigeria. The finding of this study are discussed in relation to the objective of the study. Finding express that the mean difference between pretest and posttest is high which means the instructional strategy under study (field trip and lecture method) were equally important at improving students' performance at different levels the experimental mean is higher than the control group mean which shows that the field trip teaching strategy is more effective and this is supported by Muhammad and Nasrin,(2019) found that field trip promote science attitude and develop positively to students in geographical teaching. Also, Adetoun, (2018) found several critical discussions have been a pointer to the Importance of field work in teaching and learning of geography it was induce from the study that the application of field work as part of the pedagogy of teaching geography in schools has immeasurable benefits for both geography teachers and students. Filgona, (2016) revealed that there was a



statistically significant difference in the academic achievement of students taught geography using field trip teaching strategy and conventional lecture method. Wada, (2016) found that Field-trip teaching strategy enhanced retention, motivated students and it is gender friendly. From the results of analysis discussed, recommendations were made one of which was that there is need for teaching and learning strategies involving students' participation such as Field-trip teaching strategy which enhanced performance, retention and motivation of students. The research investigates the effects y field trip on retention and motivation here it lacks school location and gender differences. The study recommended that, teaching and learning activities engaging/involving students' participation such as field trip to be encourage in secondary schools as it is often neglected.

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