

## The Extent of Fieldwork Application in the Teaching of Geography in Federal Universities in Nigeria

ADETOUN GLADYS EMIOLA  
University of Lagos, Nigeria

**Abstract.** Fieldwork in geography is an inseparable, unalienable and cooperate part of the teaching and learning process. When viewed from the nature and content of geography which makes continuous reference to space and spatial features, the field outside the classroom inevitably remains the only true laboratory for carrying out geographical experiments as well as observation in teaching and learning. Be that as it may, several factors, have largely and grossly under applied the use of fieldwork in teaching geography in Nigerian Federal universities. Hence there is the need to assess the extent of use of fieldwork as a method of teaching geography in Nigerian federal universities. To carry out this research, four research questions were raised, and four major objectives posed. This study is of significant relevance to the government, curriculum developers, geography lecturers and geography students in various federal universities in Nigeria. The theoretical framework for the study was based on Kolb's theory of Experiential Learning. The study viewed various literature and works of prominent geographers and social scientists who have ventured into the germane but neglected concept of fieldwork application in teaching geography. Teachers and students

questionnaire were the research instruments utilized in this study, while stratified random sampling method was used to select the sample size. Consequently, a sample size of 109 respondents comprising of 100 students and 9 lecturers was used in this study. Descriptive survey design was used in the analysis of the results. Several critical findings and recommendations were made.

**Keywords:** fieldwork, federal universities, teaching, experiential learning.

### 1. Introduction

Geography as a discipline of inquiry under the social sciences, seeks to bring together or unite the physical and human dimensions and landscapes of the world in the study of people, places and environments (Ajibade, 2010). The role of the geographer therefore is to make direct observations and ask questions about the earth's physical and human (cultural) environments as well as the spatial distribution of various features within these environments. Geographers also explore how people and places interact with each other as well as why and in what ways they change over time.

Fieldwork is the 'doing' aspect of geography which involves students studying geography

outside the classroom through – observing, questioning, planning, collecting, recording, evaluating, representing, analyzing, concluding, communicating, reflecting and responding. Fieldwork in geography is hence an inseparable, unalienable and cooperate part of the teaching and learning process. It is a vitally important part of any Geography degree programs offered in all institution of higher learning. Fieldwork is seen generally as an essential way in which students deepen their knowledge of the subject, and become equipped with the wide range of skills that make them so employable once they graduate. Research has shown that when students ‘see it for themselves’ their enjoyment and understanding is enhanced. In addition it helps develop subject-specific and transferable skills, promotes ‘active learning’ and links theory to ‘real world’ examples in a ‘spiral of learning’. Internationally, fieldwork is seen as intrinsic to geographical education.

Fieldwork is here defined as any study of the environment that takes place outside the classroom.

Geographical studies make continuous reference to space and both physical and cultural phenomenon existing in space, therefore the field outside the classroom remains the true and most viable laboratory for carrying out geographical experiments and practical studies. However, according to Ajibade and Rheem (2007), certain factors ranging from social, political, economic, to others such as experience and logistics aspects of fieldwork combine to make organizing fieldwork a task which is not less herculean for the average teacher. As a result of these observable limiting factors, there is a dire need to assess the extent of the application of fieldwork as a teaching method in geography especially in tertiary institutions with specific reference to

Nigerian Federal universities. This is with the view to increase and improve the level of implementation and application in teaching geography courses and providing workable guides for organizing purposeful fieldwork exercises in within the framework of a developing economy like Nigeria.

Fieldwork has been defined by many authors in various ways, but underlying all these definitions is the fact that it is a teaching method which is characterized by the claim that it can usefully enhance the causal link between student affective response (emotions, feelings and values) and deep learning (Higgitt,1996). According to Fuller, Edmondson, France, Higgitt, and Ratinen, (2006) fieldwork has traditionally been important to geographers and for many it remains a defining feature of the subject and a distinctive and important ‘mode of learning’. Virtually all lecturers in geography recognize the importance of fieldwork as a vital mode of teaching in the subject. Stressing the socially constructed nature of knowledge and identity, however, Nairn (2005) has made a valuable critique of the assumption that human geography fieldwork gives students direct and unmediated access to ‘the truth’. Various researches that have been conducted into the relationship between fieldwork and student learning suggest that fieldwork provides a number of pedagogical benefits. Fieldwork is therefore valuable because it can enhance student affective response in positive ways and thus aid deeper forms of learning. Research further suggests that surface learning tends to occur when learners are anxious about failure, while deeper learning takes place when they are more relaxed and enjoying their learning, such that can happen when they are on the field.

Fieldwork is regarded as being central to teaching, research and is it highly intrinsic to

the very nature of being a geographer, as through fieldwork, geography learners can become more participative, purposeful, enthusiastic and more positive in their learning. Fieldwork is the best and most immediate means of bringing the two aspects of geography together in the experiences of the student. These two aspects of geography are; a body of knowledge and a distinctive method of study (Bailey, 1974). Hence fieldwork can be said to be nothing more than a direct, practical, systematic observation of a phenomenon by a geographer in his or her subject matter mostly to derive primary data. Fieldwork is the process of observing and collecting data about people, cultures, and natural environments mostly by students under the guidance of their teacher. Field work has the ability to open up students to new worlds that they may not have known existed and can spark interests that may sustain them for the rest of their lives (Carroll, 2007).

Geographers regard fieldwork as a vital instrument for understanding our world through direct experience, for gathering basic data about this world, and as a fundamental method for enacting geographical education.

A fresh look at the pedagogic implications for fieldwork in formal education offers ideas both for promoting it in geographical education and for maintaining its place in the geography curriculum.

Forward-looking geographers and educators now recognize that alternative strategies, especially those involving the use of information technology, should be developed to reaffirm the centrality of fieldwork in geographical and wider education.

Certain basic steps are required in the preparation for a geographical fieldwork

according to Jones and Sauer (1915) which include:

- Reading up literature on the area extensively to familiarize with the locality.
- Acquire maps of the area such as topographic, vegetation, climate, and hydrographic etc.
- Carry out a reconnaissance survey from which and draw up a schedule stating the purpose for the trip as well as specific places of interest; time to be spent at each site and the best means of covering the area (on foot, on bicycle, by car etc).
- Know the cost implications.

Over the years, a number of claims have been made about the pedagogical benefits of fieldwork which include:

- Fieldwork gives students the opportunity to develop a range of subject-specific skills (mapping, data collection and analysis) and transferable skills, such as independent learning and problem-solving (Andrews, Kneale, Sognez, Stewart, and Stott, 2003) observation skills research skills, measurement skills, recording skills, communication skills and study skills (Hurry, 1989).
- Fieldwork can be useful to encourage the development of interpersonal skills (Boyle, Conchie, Maguire, Martin, Milson, Nash, Rawlinson, and Turner, & Wurthmann 2003).
- Fieldwork lends itself to the promotion of active rather than passive modes of learning (Haigh, 1996). Much attention has also been drawn to the role of active experimentation in Kolb's experiential learning cycle and how this theory "has a ready connection

with students learning directly from the environment, particularly in fieldwork” (Healey & Jenkins, 2000).

- Fieldwork can create opportunities to “connect theory with real experience” (Kent, Gilbertson, and Hunt, 1997). This reinforces classroom-based learning by following it through in particular ‘real world’ situations. It enables students and researchers to examine the way scientific theories interact with real life.
- Fieldwork is one of the distinctive features of a geographical education. Its importance for learning and raising achievement in geography is endorsed by geographers everywhere.

## 2. Statement of the Problem

Geography education at the tertiary level in most developing countries such as Nigeria has for some decades now been faced with serious problems and challenges; from inadequate manpower to irregular power supply and lack of resources and equipment. There is also a great variation obtained between the understanding of classroom knowledge and the field experience gained by the students in the same lesson. Various researches have shown that several geography curriculums are shifting more towards a field enquiry approach as a result of pre-existing problems such as large class size, our highly urbanized landscape which lead to a lack of suitable sites, and geography teachers who do not have an understanding of the role fieldwork plays in constructing meaning in geography. The consequences of this scenario is an ever increasing failure rate in examinations and the turning out of geography graduates who know almost every theoretical aspect of

geographical phenomena, and next to nothing about the corresponding features on the field. The application of fieldwork is intended to aid in the nurturing of geography students that are ‘sound’ enough to merge their classroom knowledge with a result-oriented fieldwork experience. This led to the challenge taken up by the researcher to explore the extent of fieldwork application in teaching and learning geography in federal universities in Nigeria.

## 3. Purpose of the study

The purpose of this study is to assess the extent of fieldwork application in the teaching of geography in federal universities in Nigeria, with the focus on university of Lagos.

Other objectives that emanated to guide the study include, to:

- Examine the influence of utilization of fieldwork on the teaching and learning of geography in federal universities.
- Determine the extent of prioritization of fieldwork application in teaching geography in the University of Lagos
- Determine the reasons for the observed level or extent of fieldwork application in teaching geography in the University of Lagos.
- Proffer viable and applicable solutions and adjustments to the observed level of fieldwork application in teaching geography in Nigerian Universities.

## 4. Research questions

In order to achieve the objectives of this study, the following research question were raised:

- What influence does fieldwork exert on the teaching and learning of geography in Nigerian universities?

- To what extent is fieldwork being prioritized in teaching geography in Nigerian federal universities?
- What are the reasons for the observed level or extent of fieldwork application in teaching geography in the University of Lagos?
- What are the most viable and applicable solutions and necessary adjustments to observed level of fieldwork application in teaching geography in Nigerian federal Universities?

### 5. Theoretical Perspective

The theory underpinning this study is the Experiential learning theory by Kolb (1984). This theory defines learning as “the process whereby knowledge is created through the transformation of experience. In the words of Kolb, “knowledge results from the combination of grasping and transforming experience” (Kolb, 1984, p. 41). This theory emphasizes the major role of fieldwork in the gaining of knowledge through active and actual experiences on the field. Fieldwork affirms theoretical learning in geography through the practical experimentation and experiences of these theories in classroom on the field. Fieldwork gives the students the opportunity to build their own learning through experiences gained on the field, and this is the major basis of the Experiential learning theory by Kolb (1984). Experiential learning refers to the testing and performance of series of actions and careful observation of certain physical phenomenon as well as their effects in order to learn about something. This action in science is carried out in the laboratory.

According to Kolb, the experiential learning model portrays two dialectically related models of grasping experiences; Concrete Experience (CE) and Abstract Conceptualization (AC) and two

dialectically related modes of transforming experience; Reflective Observation (RO) and Active Experimentation (AE). Primarily, fieldwork is regarded as any educational activity that takes place outside the classroom which leads to gaining of experience by the learner. These activities may take place anywhere that practical outside activities are possible such as the local park, a nearby locality or even the school grounds (Hurry, 1991). Every child has a sense of curiosity, and a desire to ‘know more’ and this is fundamental to fieldwork.

The value of fieldwork to both students and teachers of geography in the modern society cannot be over emphasized. Boyle, Maquire, Milsom, Nash, Rawlison, Turner, Wurthman & Condie (2007) have linked the benefits students derive from geography, geology, and environmental science fieldwork to an enhancement of ‘deep learning’. With deep learning, the motivation for learning comes from ‘within’; it is a valuable ‘end’ in itself and is characterized by critical thinking and a sense of ownership. Research suggests that surface learning tends to occur when learners are anxious about failure, while deep learning takes place when they are more relaxed and enjoying their learning (Boyle et al., 2007).

A typical fieldwork programme in a university setting is intended to:

- Connect theory and practice, applying concepts and skills outside the classroom
- Connect local and global, appreciating how geographical processes take place at different scales
- Broaden student’s horizons by offering diverse field sites and types of fieldwork, to support their academic and personal growth

- Give students' experience of teamwork
- Enhance students' skill set with a range of skills, relevant to future careers within and outside geography
- Give student's a firm understanding of the ethical, political and safety issues involved in conducting research in different sites
- Enthuse and excite student's curiosity and sense of discovery, so that they become able and confident in developing their own research enquiry

Stephanie (2014), who was the experiential learning coordinator at Western University Canada, broadly defined fieldwork as a descriptive term for the collection of data outside of a controlled laboratory setting. She further stated that, the practice and focus of fieldwork varies across disciplines but is mainly concentrated in the natural and social sciences of which geography is inclusive. Inquiry based learning forms the basis of an effective University geography education; however, literature specifically addressing fieldwork in geography highlight that being in the field is highly synonymous with the characteristics of inquiry based learning (Watson, 2008).

In a research by Nundy (2001) on the role of fieldwork in students' learning, four major benefits were highlighted, which are:

- A positive impact on long-term memory due to the memorable nature of fieldwork setting
- Affective benefits of the residential experience, such as individual growth and improvements in social skills. The extent to which fieldwork develops transferable skills depends on the context in which the fieldwork is undertaken.

- Reinforcement between the affective and the cognitive domains, with each influencing the other and
- Providing a bridge to higher order learning.

## 6. Significance of the study

The results from this study will serve as relevant indispensable tools which will induce governments at various levels, educational agencies, curriculum developers educational institutions, educational administrators, faculties and Departments of geography to pay a higher level of attention to the improvement of the quality of fieldwork. It will also assess the extent of its application in curriculum development and implementation in geography education in tertiary institutions, the quality and quantity of geography fieldwork materials as well as quality funding for all fieldwork activities in geography education in Nigerian federal universities.

## 7. Scope of the study

This study is limited to the evaluation of the extent of application of fieldwork in teaching geography in Nigerian federal universities with specific reference to University of Lagos. The study is strictly centered on the level of to which fieldwork is utilized in teaching geography but with consideration to the prospects of fieldwork and possible adjustments to the observed extent of its application I Nigerian Universities.

## 8. Definition of terms

**Fieldwork:** - a teaching method which is characterized by the collection of information outside a classroom, laboratory, library or workplace setting.

**Physical environment:** - the physical environment includes land, water, plants and animals, buildings and other infrastructure and the entire natural resources that provide our basic needs and opportunities for social, economic and academic development.

**Intended Learning outcomes:** -this articulates the desired end product of a learning process, i.e. what students are expected to know, do and value by the end of a given course.

**Federal universities:** - these are universities that are predominantly funded by public means through the federal government as opposed to state owned or private universities.

## 9. Methodology

### 9.1 Research design

The study adopted a descriptive survey design. This is because the researcher was not able to manipulate the variables for the simple reason that they have already occurred. Therefore, the design simply report's findings on a particular problem as it exit.

### 9.2 Research instrument

The main instrument used in this study was the questionnaire. Two types of questionnaire used are:

- Teachers' questionnaire
- Students' questionnaire

Both of these instruments were selected with the aim of providing useful information which would be used to identify, examine, and assess the extent of the application of fieldwork in the teaching of geography in federal universities in Nigeria. The teachers' questionnaire was made up of 27 questions and divided into 3 sections A, B and C. The students; questionnaire on the other hand

comprised – questions and was divided into sections 3 sections A, B and C with 28 questions in all.

### 9.3 Research Location

This study was carried out in University of Lagos, Akoka campus a Federal University located in Yaba Local Government area of Lagos State.

### 9.4 Research Participants

All participants in this study were lecturers and students in Geography Department and Department of Arts and Social Sciences Education (Education Geography), in the University of Lagos, Akoka.

### 9.5 Data Analysis

The researcher organized the data in line with the research questions and proceeded to analyze same with descriptive statistics and content analysis. The data was then summarized and organized into themes and presented in narrative forms with the use of some basic statistics tools which included; arithmetic mean, chi-square, frequency distribution, summation and percentage frequency.

## 10. Research Findings

Research findings based on the administered questionnaires revealed the following:

- Student respondents agree that fieldwork influences teaching and learning of geography because it forms the basis of geography lessons and students tend to remember lessons from fieldwork more vividly than lessons taught during classroom lectures. Lecturers also agree that teaching is easier when students are

engaged in fieldwork activities rather than classroom learning.

- Fieldwork motivates students to learn better than classroom learning and they also tend to develop new skills when engaged in fieldwork activities. Lecturers supported that fieldwork is adequately applied in teaching geography courses in the University of Lagos to encourage the development of various skills in the students, despite the fact that it is poorly funded by the authorities.
- Students believe that fieldwork activities are poorly funded and suffer from poor planning. Lecturers opined that fieldwork also suffers from poor planning as a result of slow response from the university management in releasing the inadequate funds to time.
- Students are of the opinion that they are being made to pay too much to go on fieldtrips without which they will not fulfill graduation requirements. Lecturers are of the opinion that the university management should be fully responsible for fieldwork funding while students only fend for themselves on such trips.

## 11. Discussion of findings

The study assessed the extent of fieldwork application in the teaching of geography in federal universities in Nigeria; a case study of University of Lagos. The results of the findings based on the four research questions formulated during the period of the study are discussed below.

The result of the findings for research question one which states that: what influence does fieldwork exert on the teaching and learning of geography in

Nigerian federal universities?” the study revealed that fieldwork influences teaching and learning of geography because it forms the basis of geography lessons and students tend to remember lessons from fieldwork more vividly than lessons taught during classroom lectures. The responses from the lecturers were similar in that they believe that teaching is easier when students are engaged in fieldwork activities rather than classroom learning. This is in line with results of Nundy (2001) which highlighted four major benefits associated with fieldwork: a positive impact on long-term memory due to the memorable nature of fieldwork setting; affective benefits of the residential experience, such as individual growth and improvement in social skills; reinforcement between the affective and cognitive, with each influencing the other and providing a bridge to higher order learning.

Research question two stated that “to what extent is fieldwork being prioritized in teaching geography in Nigerian federal universities? The study revealed that fieldwork motivates students to learn better than classroom learning, and they also tend to develop new skills when engaged in fieldwork activities. Lecturers also supported this response and added that fieldwork is adequately applied in teaching geography courses in University of Lagos irrespective of the fact that geography fieldwork is poorly funded in University of Lagos. This is in agreement with the results of Sarkar and Fraizer (2008) which found out that combining inquiry based practices with fieldwork made the learning more meaningful, while increasing the active engagement of students. This was supported by McComas (2008) that fieldwork creates these first-hand experiences, encourages questions and inspires curiosity because it

demands the application of science process skills.

Research question three went thus “what are the reasons for the observed level or extent of fieldwork application in teaching geography in the University of Lagos?” The study revealed that fieldwork activities in University of Lagos are poorly funded and suffer from poor planning. Though lecturers agree that fieldwork does suffer from poor funding and poor planning, they said they are willing to take students on fieldtrips as often as the need arise if there is proper funding. This was originally in line with the result of Blumenfied, Krajcik and Tal (2006), which found out that students experienced significant gains as demonstrated by pre and posttests when fieldwork was combined with project based learning. In another project based learning assignment, researchers; Kenney, Militana, & Donohue (2003) found teachers to be impressed with students’ results following fieldwork based project.

The last research question stated that “what are the most viable and applicable solutions to the observed level of fieldwork application in teaching geography in Nigerian federal universities?” the study observed that students are being made to pay too much to go on fieldtrips without which they will not fulfill graduation requirements as these trips are compulsory for them. Lecturers are of the opinion that the university management should be fully responsible for fieldwork funding while students are made to only fend for themselves on such trips. This is in line with Morris (2010), who opined that school boards, superintendents and legislature have the fiduciary trust endowed by the community to provide money for the education of all students in the public schools. According to him, this is their job

and if they cannot do ‘their job’ they should be removed from office.

## 12. Implications of the findings

The findings of this study have significantly assessed the extent of the application of fieldwork in the teaching of geography in federal universities in Nigeria, a study of University of Lagos. To examine the influence of fieldwork utilization on the teaching and learning of geography in Nigerian universities; determine the extent of the prioritization of fieldwork application in teaching geography in Nigerian universities; ascertain the specific reasons for the observed level of fieldwork application in teaching geography in University of Lagos; proffer viable and applicable solutions and adjustments to the observed level of fieldwork application in teaching geography in Nigerian universities. With all the aforementioned, we can infer that application of fieldwork is an inseparable component of the pedagogy of teaching geography in Nigerian universities. Fieldwork can give both students and lecturers direct experiences that challenge their preconceptions. The reality of others can ‘call us to attention’ in ways that make them matter to us. This ‘enhanced affective response’ helps deepen our understanding of the wider world and our place within it. It is for this reason that fieldwork remains a valuable mode of learning for geography students.

This study pin points the following implications for improving geography teaching as it relates to all institutions of learning:

- The development of the qualifications and abilities of all teachers through teacher training, undergraduate training and in-service

- experience within and outside the classroom
- The provision of enlightenment on how to plan and manage fieldwork as well as factors that can be manipulated or influenced to improve the outcome of fieldwork;
- The provision of a healthy framework for both the students and lecturers on fieldwork activities and provision of basic amenities that can ensure its success.

### 13. Conclusion

The foregoing discussions have been a pointer to the importance of fieldwork in the teaching and learning of geography in universities in Nigeria. It was deduced from the study that the application of fieldwork as a part of the pedagogy of teaching geography in federal universities in Nigeria has immeasurable benefits for both geography lecturers and students. The application of this pedagogy improves students' learning and consequent academic performance while the absence of it effectively reduces the benefits of fieldwork. The enjoyment many students derive from studying geography, geology and other environmental sciences stems majorly from fieldwork as a result of its enhancement of deep learning, which brings about motivation from within the student. The resultant effect of this motivation on the students' is, critical thinking and a sense of ownership in learning. There is therefore the need to improve the extent of fieldwork application in teaching and learning geography in Nigerian federal universities.

### 14. Recommendations

The following recommendations are made:

- This study can be generalized across the states and all the federal universities in Nigeria to improved sample size.
- Government should make efforts in supplementing the total cost of fieldwork through direct funding or by subsidizing the material and financial burden on universities.
- Efforts should be made by government to ease the burden of executing fieldwork through the provision of reliable and highly subsidized means and modes of transportation for geography students on fieldwork.
- Financial incentives should be given to geography lecturers in form of allowances to encourage them to embark on fieldwork.
- Geography lecturers must be trained and re-trained in the knowledge and understanding of new environments, facilities as well as methodologies of executing fieldwork in geography.
- Lecturers should endeavor to make their lessons more practical and true to life by organizing as many fieldtrips as possible in every semester. Emphasis should also be laid on the study of the immediate environment as against unnecessarily far trips.
- Geography students in Nigerian universities should be sensitized on the need for regular fieldwork in their geography lessons and the need to take such field activities more seriously.
- Students should be actively engaged in the planning of fieldwork to ensure the inclusion of activities to suit their academic and non-academic needs.
- Curriculum developers should create and modify a geography curriculum

with promotes the inclusion of fieldwork in teaching geography in federal universities. Fieldwork must be well integrated into the geography curriculum. It must not be seen as a “stand alone” activity, but part of the continuum of geographical learning.

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