ENHANCING GEOGRAPHY EDUCATION THROUGH PRACTICAL EXPERIENCES: A STUDY OF SECONDARY SCHOOLS IN ONDO WEST, NIGERIA

OMOSUYI OLUWAYEMISI BUKOLA (PhD)
yemipaul2004@yahoo.com/08034986122
&
AKINFISOYE EMMANUEL OLUWADUNSIN
akinfisoyee@afued.edu.ng/070365336653

DEPARTMENT OF GEOGRAPHY,
ADEYEMI FEDERAL UNIVERSITY OF EDUCATION, ONDO, NIGERIA

Abstract
Geography examines the spatial distribution of physical, social, and economic phenomena. However, its abstract concepts and extensive curriculum often hinder effective pedagogy, leading to declining student enrolment. This study investigates the impact of practical experiences—such as fieldwork, GIS applications, models, and excursions—on students' conceptual understanding of Geography. It also assesses the adequacy of instructional materials and the challenges faced in implementation. Using a survey design, 200 students from 10 secondary schools (both public and private) in Ondo West LGA, Nigeria, were sampled through validated questionnaires and oral interviews. Data analysis employed simple percentages. Findings reveal insufficient exposure to practical methods, despite 95% of students affirming their value. Key constraints include inadequate funding, obsolete or unavailable materials (81%), limited instructional time, and teacher reluctance. The study recommends integrating practical sessions into the curriculum, increasing funding, providing teacher training, and supplying adequate resources to transform Geography education.
Keywords: Geography Education, Practical Experience, Fieldwork, Pedagogy, Instructional Resources

1.1. Introduction

Geography education stands at a critical crossroads globally. Bridging the natural and social sciences, it provides learners with essential skills in spatial reasoning, environmental awareness, and analytical thinking tools vital for tackling modern challenges like climate change, urbanization, and sustainable development (Fargher, 2023; Solem et al., 2021). However, despite its importance, the subject faces declining enrollment and is frequently perceived as overly theoretical and detached from real-world applications (Heffron & Downs, 2021). This issue is particularly acute in resource-limited regions such as Nigeria, where traditional teaching methods further alienate students (Adeyemi, 2023).

Experiential learning in geography has long been recognized for its educational benefits. Fieldwork, GIS applications, model-based learning, and community projects help concretize abstract ideas, promoting deeper comprehension (Hope, 2009; Gryl & Jekel, 2022). These methods align with constructivist pedagogy, encouraging students to actively engage with geographic concepts (Kerski, 2021). Studies have shown that such approaches can make students' knowledge retention increase by 40–60% compared to lecture-based instruction while also sharpening critical thinking and problem-solving skills (ZurHrich & Abulibdeh, 2020; Fargher, 2023).

With these advantages, practical geography is still underutilized in many of our education systems. In Sub-Saharan Africa, barriers include insufficient funding for labs and technology, outdated equipment, rigid curricula that prioritize content over application, inadequate teacher training, and logistical constraints such as safety and transportation (Kerski, 2021; Heffron & Downs, 2021; Gryl & Jekel, 2022; Nairn, 2005; Adeyemi, 2023).

Nigeria is a typical example of these challenges. Its geography curriculum is heavily theoretical, with practical components mostly treated as optional rather than integral (Adeyemi, 2023). A 2022 survey of Ondo State secondary schools revealed that less than 15% conducted regular fieldwork, while 90% of the secondary schools lacked functional GIS tools (Ondo State Ministry of Education, 2022). This imbalance has contributed to a 30% decline in secondary-level geography enrollment since 2015 (WAEC, 2022), underscoring a widening gap between curricular objectives and classroom practices.

1.2. Statement of the Problem

A persistent issue in geography education is the overreliance on theoretical instruction, which fails to adequately prepare students for real-world spatial challenges. Despite the subject's inherently applied nature, many curricula prioritize textbook knowledge over experiential learning (Standish, 2022; Mitchell, 2021). This disconnect

weakens students' ability to develop key competencies such as spatial analysis and environmental literacy; essential for addressing pressing global issues like climate change, urban disparities, and sustainability (Solem, 2022; Bourke, 2023).

The consequences are in two forms. First, inadequate practical exposure restricts skill development in data collection, GIS-based spatial analysis, and applied problem-solving (DeLyser et al., 2020; Kulo & Kerski, 2021). Without practical experiences, students struggle to connect theory with real-world contexts. Second, lack of fieldwork and community-based projects impedes the cultivation of spatial citizenship - a pedagogical goal aimed at fostering informed, engaged individuals who can critically address socio-environmental issues (Fargher, 2023; Mitchell, 2021). Activities such as local mapping and field investigations are crucial for nurturing civic responsibility and place-based awareness.

Yet systemic obstacles affect the integration of practical geography. Resource shortages, unequal access to geospatial technologies, logistical challenges, and time constraints often hinder schools especially in underfunded regions from implementing experiential learning (Fuller, 2021; Bourke, 2023). Also, many teachers do not have the training and institutional support needed to conduct fieldwork or technology-driven lessons. Inflexible assessment systems that favor memorization other than applied knowledge further stifle pedagogical innovation.

Addressing these challenges needs a systemic overhaul - reforming curricula, enhancing teacher training, and revising policies to integrate experiential learning as a fundamental principle of geographic education. This study seeks to refine the ongoing efforts to improve geography pedagogy (Solem et al., 2021; Fargher, 2023). It assesses the extent to which Nigerian secondary schools incorporate practical learning in geography and proposes appreciable strategies to bridge theory and practice in geography education. The research addresses a crucial gap, especially in low-resource contexts where geographic insights are increasingly vital.

1.3. Aim and Objectives

This study aims at assessing students' exposure to practical experience and to achieve this, the following specific objectives are stated:

i) to ascertain whether practical experience has effect on students' learning process in Geography.
ii) to examine the adequacy or efficiency of practical experience
iii) to determine if materials for practical are available for use
iv) to identify possible problems associated with practical experience

1.4. Study Area

The study area is Ondo West Local Government Area in Ondo State, Nigeria, with its headquarter in Ondo City. It is bounded in the North by Ondo East Local Government, in the South by Odigbo Local Government, in the East by Ondo East Local Government and West by Ile-Oluji/Okeigbo Local Government. The climate is the lowland Tropical Rainforest type with distinct wet and dry seasons; mean annual rainfall exceeds 2000mm while relative humidity is over 75%. The temperature ranges between 21^0C and 29^0C. Rainy season is experienced between April – October and dry season between November – March. The region falls in the tropical rainforest with varieties of hard wood timber such as teak, mahogany, iroko etc. The soils in this area are formed from sedimentary rocks and are of high agricultural value for both trees and arable crops. The natural forest is the high forest composed of hardwood timber such as *Terminalia superb, Lophira procera* etc.

2.0. Methodology

The study adopted a survey research design. The target population consisted of senior secondary school students enrolled in Geography. A total of ten secondary schools, both public and private, were selected, with 20 Geography students chosen from each, resulting in 200 participants overall. This was done purposively. A researcher-designed questionnaire titled – "**TRANSFORMING GEOGRAPHY EDUCATION: THE INTEGRATION OF PRACTICAL EXPERIENCE"**, and validated by subject experts, was used to collect data. The distribution and retrieval of the questionnaires were carried out by the researcher and a research assistant. Additionally, oral interviews were conducted with some of the selected students to supplement the questionnaire responses. Data collected were analyzed using descriptive statistics, specifically frequencies and simple percentages.

3.0. Results and Discussion

Table 1: Relevance of Practical Experience on Students

S/N	ITEMS	YES	%	NO	%
1	Do you understand most concepts in Geography without practical experience?	60	30	140	70
2	Some of your topics need the inclusion or use of practical experience	190	95	10	5
3	With practical, do you understand more geographical concepts	190	95	10	5
4	Is practical experience of utmost importance in Geography?	195	97	5	3
5	Practical are just added advantage, it is not special or important in the teaching and learning of Geography?	20	10	180	90

The survey data presented in Table 1 demonstrate students' overwhelming endorsement of experiential learning in geography education. The findings reveal a clear pattern of student preferences favoring hands-on approaches over purely theoretical instruction.
Merely 30% of participants believed they could comprehend most geographical concepts without practical application, while the substantial majority (70%) reported needing experiential components for understanding. This disparity highlights the pedagogical constraints of exclusively theoretical approaches in geography education (Standish, 2022; Mitchell, 2021).

Alarmingly, 95% of respondents identified certain geographical topics that require practical engagement for effective learning. This finding is in line with Kerski (2020) and DeLyser et al. (2020), which affirms that direct interaction with spatial phenomena through fieldwork, GIS applications, and data collection significantly enhances conceptual understanding.

Also, 95% of students reported improved understanding when practical elements were incorporated into teaching. This aligns with constructivist learning principles and supports Fargher's (2023) findings that students participating in fieldwork demonstrate superior conceptual understanding and application abilities when compared to those confined to classroom-based learning.

The survey revealed almost even agreement (97%) regarding the essential nature of practical experience in geography education. This reveals the growing academic agreement that practical learning cultivates crucial competencies including spatial analysis, environmental literacy, and critical thinking (Solem et al., 2021; Bourke, 2023).

Only 10% of respondents considered practical components as merely supplementary, while 90% rejected this idea. This strong preference strengthens Fuller's (2021) assertion that experiential learning forms a fundamental rather than optional element of geographic education.

These findings wholesomely demonstrate students' clear recognition of how practical methodologies amplify comprehension, engagement, and analytical skills in geography. The data provide empirical support for contemporary teaching approaches that emphasize applied and student-centered learning in geographic education. Particularly in developing countries like Nigeria, connecting the theory-practice divide through investments in practical or field-based learning, geospatial technologies, and educator professional development emerges as a critical imperative. Such measures will ensure geography education maintains its relevance in preparing students to address complex spatial and environmental challenges.

Table 2: Adequacy of Practical Experience

S/N	ITEMS	YES	%	NO	%
6	Are you exposed to enough practical experience?	18	9	182	91
7	Is there any need to organise more practical classes?	194	97	6	3
8	Practical classes should be organised regularly	185	93	15	7
9	Students should be exposed to practical at each level of study	180	90	20	10
10	Should teaching be limited to the classroom only?	10	5	190	95

The data presented in Table 2 demonstrates a contrasting perspective between student expectations and current practices in geography education, revealing considerable dissatisfaction with existing practical learning opportunities. The survey results show a clear student preference for enhanced experiential components throughout their geographic studies.

Only 9% of respondents recorded receiving adequate practical instruction, while a whopping 91% indicated their practical learning opportunities were inadequate. This difference between curriculum objectives and actual classroom implementation reflects systemic hurdles recorded by Kerski (2021) and Gryl & Jekel (2022), particularly in resource-limited educational settings where equipment shortages, funding constraints, and inadequate teacher training hinder effective practical instruction.

Also, 97% of students called for more practical geography classes, supporting Fargher's (2023) affirmation that diverse and recurring experiential learning opportunities significantly improve student outcomes. Interactive methods including field studies, cartographic exercises, GIS laboratory sessions, and community-based investigations provide active learning environments that promote deeper engagement and knowledge retention.

The result revealed that 93% of the respondents wanted regular practical sessions, matching with educational best practices that prioritise continuous applied learning for developing spatial cognition and analytical abilities. As Mitchell (2021) and DeLyser et al. (2020) illustrate, lasting engagement with practical activities fosters progressive skill development in observation techniques, data interpretation, and spatial synthesis.

Ninety percent of respondents maintained incorporating practical components at all educational levels, promoting the spiral curriculum approach advocated by Solem et al. (2021). This model supports incremental skill development, where foundational practical competencies are established early and systematically expanded throughout students' academic progression.

A striking 95% of students go against limiting geography education only to classroom settings, with a mere 5% supporting this traditional approach. This finding substantiates Bourke's (2023) stance that meaningful geographic education must transcend classroom boundaries through either physical fieldwork or technological alternatives when logistical constraints exist.

These collective findings highlight students' strong preference for practical learning approaches and their dissatisfaction with current implementation levels. The result is in agreement with contemporary geographic education scholarship emphasizing applied learning's role in developing essential spatial competencies and civic engagement skills. To address these demonstrated needs, education stakeholders must prioritize:

- Systemic integration of practical components
- Resource allocation for equipment and facilities
- Comprehensive teacher professional development
- Flexible instructional approaches connecting theoretical concepts with real-world applications

The data presents a compelling case for educational reform to bridge the existing theory-practice divide in geography instruction, particularly in resource-constrained environments where such improvements could yield significant pedagogical benefits.

Table3: Availability of materials for practical.

S/N	ITEMS	YES	%	NO	%
11	Is the equipment for practical classes readily available in your Geography laboratory?	38	19	162	81
12	The available equipment are functioning and not obsolete	40	20	160	80
13	Have you ever been to the Geographical garden?	20	10	180	90
14	Do you have a viable vehicle for field trips or excursion in your school?	0	0	200	100

Table 3 highlights the severe inadequacy of resources and infrastructure necessary for effective practical geography instruction in schools. The responses point to a widespread lack of essential tools, facilities, and logistical support, which hinders students' ability to engage in meaningful experiential learning.
Only 19% of students reported that equipment for practical classes is readily available in their school geography laboratories, while a significant 81% stated otherwise. This reflects a major resource deficit, consistent with findings by Kerski (2021) and Adeyemi (2023), who noted that many secondary schools especially in underfunded education systems like Nigeria's lack the physical tools (e.g., topographic maps, weather instruments, GIS hardware) necessary for quality practical instruction. Without access to these tools, students are confined to theoretical learning, missing out on core geography competencies.

Furthermore, only 20% of respondents indicated that the available equipment is functional and up to date, while 80% reported issues of obsolescence or non-functionality. This supports Gryl & Jekel (2022) who highlight that

outdated or broken-down instructional materials contribute to student disengagement and reduce the effectiveness of geography teaching. Modern geography requires tools like GPS devices, updated satellite imagery, and digital mapping software to reflect current geospatial realities.

A mere 10% of students had ever visited a geographical garden, with 90% never having done so. Geographical gardens, as noted by Hope (2009) and Fargher (2023), are important for teaching concepts such as vegetation types, microclimates, and land use. Their absence represents a missed opportunity for contextual learning. This also reflects broader infrastructural neglect in schools where outdoor learning spaces are either underutilized or nonexistent.

Alarmingly, no respondent reported access to a viable vehicle for field trips or excursions in their schools, indicating a complete lack of logistical support for off-campus learning. Field trips are basic to geography education, offering direct experience and interaction with landscapes, settlement patterns, environmental challenges, and spatial processes. As Mitchell (2021) and Fuller (2021) argue, such excursions are crucial for developing observational skills, environmental sensitivity, and spatial thinking. The total lack of transportation severely limits students' experiential exposure and undermines curriculum goals.

The data in Table 3 reveal critical gaps in the availability and functionality of materials and infrastructure for practical geography education. The shortage of laboratory tools, absence of functioning equipment, limited exposure to geography-specific spaces like gardens, and total lack of transportation for fieldwork collectively hinder the delivery of experiential learning. These challenges mirror broader systemic issues documented in recent literature particularly in under-resourced regions where inadequate investment in educational tools limits student engagement and learning outcomes. Addressing these deficits requires targeted intervention by education authorities, including funding, teacher training, resource development, and infrastructure planning to ensure that geography education is practically grounded and globally relevant.

Results from the Interview

From the interviews conducted, most respondents identified the following factors as limiting practical experience in Geography education:

i) Inadequate funding: Schools are not adequately equipped with financial resources to take care of excursions, field work or even the purchase of materials that would enhance better understanding of the subject matter.

ii) Teacher training and expertise: Some teachers either due to laziness, laxity or inadequate training are not too inclined in teaching some aspects of the subject matter at the detriment of the students.

iii) Insufficient time / Curriculum constraints: Time factor is another major factor to deal with because of the large subject matter to deal with hence the time available might not be enough to plan practical classes for the students

iv) Inadequate equipment: Models, maps, globes and other instructional materials that would assist visual understanding of some difficult concepts are either not available or obsolete in the schools

v) Student's readiness sometimes stands as a major obstacle in organising practical classes.

4.0. Conclusion

The data from Tables 1–3 collectively underscore the urgent need to reform geography education in Nigeria and similar resource-limited contexts. While students understand and appreciate the value of practical learning, they are largely deprived of it due to infrastructural, pedagogical, and logistical barriers. Addressing these gaps requires systemic intervention which include investment in laboratory and field resources, continuous teacher training in practical and geospatial techniques, curriculum restructuring to mandate and support experiential learning, and improved policy alignment between national standards and school-level implementation.

Without such reforms, the discipline risks becoming increasingly abstract and irrelevant; failing to equip students with the skills, spatial reasoning, and critical awareness needed to engage with real-world socio-environmental challenges.

5.0. Recommendations

Based on the findings and analysis, the following recommendations are proposed to enhance the effectiveness of practical geography education in Nigerian secondary schools and similar contexts:

1. Strengthen Practical Integration in Curriculum Delivery

- Mandate practical sessions as a compulsory component of geography education at all levels, not as optional add-ons.
- Review and revise curricula to allocate specific time slots for hands-on activities such as map work, field observations, and GIS exercises.

- Encourage schools to adopt a spiral model where practical skills are introduced early and reinforced progressively.

2. Improve Resource Availability and Infrastructure
   - Equip geography laboratories with functional and modern tools, including compasses, GPS devices, topographic maps, weather instruments, and GIS software.
   - Develop and maintain geographical gardens within school premises as living laboratories for environmental and landform studies.
   - Provide dedicated vehicles or establish partnerships with local transport providers to facilitate regular field trips and excursions.
3. Enhance Teacher Capacity and Pedagogical Readiness
   - Organize regular training and capacity-building workshops for geography teachers on the use of geospatial technology, fieldwork design, and student-centered experiential methods.
   - Introduce in-service certification programs in practical geography and GIS for educators.
   - Encourage peer learning and mentoring among teachers to share best practices for organizing and assessing practical classes.
4. Promote Policy Support and Educational Equity
   - Ministries of Education and relevant authorities should enforce policies that prioritize experiential learning and allocate funding for practical geography resources.
   - Ensure equity of access by supporting rural and under-resourced schools through centralized resource centers or mobile GIS labs.
   - Design virtual and low-cost alternatives (e.g., digital field trips, simulation tools) for schools facing infrastructural limitations.
5. Rethink Assessment Practices
   - Modify school and national assessment frameworks (e.g., WAEC, NECO) to include practical skill-based evaluations alongside theoretical exams.
   - Introduce project-based assessments and student field reports as part of continuous assessment to encourage real-world application of knowledge.
6. Foster School–Community Partnerships
   - Encourage collaboration with local communities, environmental agencies, and NGOs to provide field sites, data, and mentorship opportunities for students.
   - Use local environments - urban centers, farms, rivers, landfills as accessible case studies for practical geography learning.

Implementing these recommendations will require a coordinated effort from stakeholders at all levels; educational authorities, school administrators, teachers, and communities to close the theory-practice gap, boost student engagement, and prepare learners to address real-world geographic and environmental issues effectively.

References

Adeyemi, B. A. (2023). *Geography Education in Nigeria: Policy, Practice, and Prospects*. Lagos University Press.

Bourke, T. (2023). Curriculum and assessment in geography education: Navigating complexity. *International Research in Geographical and Environmental Education*, 32(1), 1-15.

DeLyser, D., Potter, A. E., & Chaney, J. (2020). Doing Fieldwork in a Pandemic: Crowdsourced Suggestions for Post-Pandemic Practice. *Journal of Geography in Higher Education*, 44(4), 479-485. (Note: While focused on pandemic, its core message about fieldwork value & adaptation is highly relevant).

Fargher, M. (2023). Digital Geographies and Embodied Learning: Transforming Geography Education. Journal of *Geography*, 122(1), 12–24.

Fargher, M. (2023). Digital geotechnologies and the future of geography education: empowering citizen scientists and spatial thinkers. *International Research in Geographical and Environmental Education*, 32(1), 16-31.

Fuller, I. C. (2021). Towards more inclusive fieldwork: Recognising and reducing barriers to participation. *Area*, 53(4), 574-581.

Gryl, I., & Jekel, T. (2022). Re-centering Geospatial Technologies in Critical Geography. *Journal of Geography in Higher Education*, 46(1), 98–116.

Heffron, S. G., & Downs, R. M. (Eds.). (2021). *Geography Education for Global Understanding*. Springer.

Jo, I., Hong, J. E., & Verma, K. (2021). GIS professional development for teachers: Factors influencing teacher use of GIS in the classroom. *Journal of Geography*, 120(4), 137-148.

Kerski, J. J. (2020). Interpreting Our World: 100 Discoveries That Revolutionized Geography. *Geography Teacher*, 17(3), 102-104.

Kerski, J. J. (2021). The Essentials of the Environment: Why Geography Matters. *Geography Teacher*, 18(2), 68–75.

Kulo, V., & Kerski, J. (2021). The Role of Virtual Fieldwork in Promoting Spatial Thinking and Geographic Inquiry. *Journal of Geography*, 120(6), 217-228.

Mitchell, D. (2021). Critical spatial citizenship: Towards a framework for citizen engagement with geospatial technologies. *Progress in Human Geography*, 45(6), 1609-1630.

Ondo State Ministry of Education. (2022). *Annual Report on Secondary Education Performance*.

Solem, M., et al. (2021). Building Global Citizenship through Geography Education. *International Research in Geographical and Environmental Education*, 30(1), 1–5.

Solem, M. (2022). Geography Education as Civic Education. *Geographical Education*, 35, 4-8.

Standish, A. (2022). What is the purpose of school geography? Defining 'powerful knowledge' and its implications for curriculum making. *Curriculum Journal*, 33(1), 22-40.

WAEC. (2022). *West African Senior School Certificate Examination: Entry Statistics*.