

# Invitation to Geographic Education in the 21st Century

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## Abstract

The initial enrolment to offer Geography as a subject in Nigeria was frustrated with poor grades such that the subject was termed “impossible subject”. This may not be unconnected with the nature and catholic scope of the discipline. Since then, there has been rapid growth and changes in terms of focus, methodology, philosophical orientation and content of the training program. Teaching of the subject has equally passed through revolutions in the past decades from the old sterile ideographic and analogue to more functional, creative and problem solving approaches. These new developments are more interesting but harder to teach so they demand teachers that are not just better educated but innovative, creative and GIS compliant. This leaves challenges of elevating the teaching and learning of geography in the 21st century. Therefore, the prospective of geographical education is explored. The paper examines geography education as a theriac for effective teaching and learning of geography. The perspectives, concepts, skills, resources, tools and methods of classroom instructions are tabulated and highlighted with a view to stimulate further interest in the study of geography and equally inspire the next generation of planetary stewards. Geography educators should not only integrate more innovative and creative approaches in the use of geographic resources and tools but blend passion with principles and constant practice for daily and weekly classroom teaching and learning.

**Keywords:** Geography, Geographic education, Teaching and learning, Teacher, Creative.

## Introduction

Geography explores the physical environment and human societies that occupy the earth. It is often acclaimed to be the mother of sciences (Ojo, 1981). The primary purpose of the subject has moved from encyclopedic description of nature to inventory and classification, then to discovering spatial relationships and understanding man’s experience in space and finally, as Leigh (1971) put it, to postpone death and reduce suffering. The content of modern day geography today is therefore tremendous and require Geographic education. Geographic study obviously entails a vast body of factual information; far more than any individual can master. It is so wide that it has been accused of fusing the results, if not the methods of a host of other subjects and in it latter day development seems to require knowledge of a large range of ancillary studies than almost any other science or arts (Wooldridge and East, 1961). It is disturbing

to note that qualifying as a trained geographer with relatively short span of life of biblical three score and ten years, one may die like Browning grammarian long before reaching the end of one’s interminable academic trail and certainly before reaching Geography (Eni, 2006). Infact the study of the earth is so broad that some have suggested facetiously that “geography is what geographer studies” (Pearson, 1968).

The foundation of geography as an academic discipline in Nigeria was laid in 1948 when the University of Ibadan was founded as a college of the university of London (Salau, 1986). Those who enrolled to do the subject were frustrated with poor grades to the extent that the subject was referred to as the “impossible subject”, probably because it was foreign with a vast body of factual information and the way it was taught. This affected the study of geography and a lot was done by geographers to salvage the situation. One major criticism of the subject is wide scope and lack of proper focus (Faniran and Okunrotifa, 1981). Besides its

catholic scope there was also the challenge of teaching and learning the subject. Since then there has been rapid growth and changes in terms of the focus, methodology, philosophical orientation and content of the training program. Teaching geography has therefore passed through several revolutions in the past decades from the old sterile ideographic and analogue to a more functional, creative and problem solving approach. However, today's rapidly changing and highly competitive world still throws a challenge of research to mankind. The challenge of effective and efficient use of up to date methods and tools in data analysis. Kpolovie (2002b) reported that virtually all researchers collect large volume of data and still analyses them manually or at best send the data to computer centers for analysis to be done by others. This is like a poor student who cannot always reason why a thing happens but willingly accept that a thing is right or correct because the teacher says so. This does not auger well for the student to gain. The student can gain more than they can learn per time when curiosity is ignited as this enhances power to reason. According McHugh (1953) retarded children do not seem to lack the power to remember nearly as much as they lack the power to reason. These call for geographic education where the principles of education can be maximized to drive home teaching and learning of the subject. How geography can be communicated in an existing and meaningful ways to students of all ages so that modern geography students and their teachers can revitalize and inspire research (Rawling and Daugherty, 1996). Taking students through geographic education will not only lay a good foundation for future researchers but boost learning among retarded children. It will help teachers in geographic instruction dealing with the "where", "why" and "what" questions to understand and organize our places (Gersmehl, 1996).

### **Evolution and perception of physical geography/geomorphology**

Geography has a chequered course of development, passing through different phases and a change. Geography evolved out of three major activities by the Greeks vis exploration, charting and speculation about mapping phenomena of weather, tides and volcanism. The fundamental change in the way humans explained the universe and nature influenced the evolution, and perception of physical geography and geomorphology. Although Europeans, Arabs, Chinese and ancient Greeks contribution to landform studies have been documented by Davies (1969) and Tinkler (1985), the works of Polybius, Posidonius, Erathosthenes, Thales, Anaximander and Aristotle had great effect on geomorphology and mathematical geography (James, 1972).

Geomorphology actually took shape in the 18th century as a result of exploration and introduction of concepts like catastrophism, uniformitarianism, cycles of erosion, self-regulating equilibrium, landforms and base level concepts (Pidwirny 2006). According to catastrophism, differences in fossil forms encountered in successive stratigraphic levels

are the product of repeated cataclysmic occurrences and repeated new creations. That is landscape had an innate permanent change only by catastrophic events. This is associated with Baron Georges Cuvier (1769-1832). Uniformitarianism holds that earth surfaces have been shaped over long time through the operation of processes that are largely in operation today. This concept is associated with James Hutton in 1785, often recognized as father of Geomorphology. Following the same trend of thought Play Fair in 1802 illustrated the Huttonian theory of the earth while Lyell in 1830 and Darwin in 1859 keyed in with the principals of Geology and origin of species respectively

The groundwork to W M Davies cycles of erosion was laid by Gilbert and Powell who detailed the effects of streams and outlined the first geomorphic classification of streams. Gilbert introduced the concept of self-regulating equilibrium landforms such as graded streams in 1914 while John Wesley Powell's descriptive classification of streams and concept of base level elaborated on the progressive erosion of mountain ranges.

### **Exploration and Survey**

Before 1900 much of the world had not been explored, however all fields of physical geography were actively collecting base data which later gave direction to the development of physical geography.

### **Conservation**

Concerns for the environment began to develop in the 1850s as a result of human development in natural areas in United States and Europe, prominent was "man and nature" by George Perkin Marsh which is a significant contribution to conservation

Post 1950 saw two concepts or paradigm that determined the nature of physical geography. These are quantitative revolution and human/land relationships. Quantitative revolution became central focus of research in physical geography where researchers began investigating processes rather than mere description of the environment

### **Man/Land relationships**

Due to the apparent influence of human activity on environment, focus was shifted to themes like environmental degradation, resource use, natural hazards, impact assessment, urbanization and Land use change. Be this as it may, Geography today, like Ojo (1981) rightly observed, is concerned with relevance to the issues of the moment and problem orientation.

### **Perspectives in classroom instruction**

Classroom instructions can be handled with a wide range of teaching strategies and resources that will actively engage

students and promote their curiosity and understanding of the world. Resources can be grouped into three categories.

- a. Natural resources such as the field or any geographical space on or above the earth surface.
- b. Human made resources such as models, instructional materials or improvised materials.
- c. Human resources such as educated, skilled, innovative and creative teachers.

The following resources can be used to drive home classrooms instructions:

1. Google maps: real game changers for teacher's, example web mapping, platform like satellite imagery, aerial photos, street mapping etc.
2. Ordinance surveys: they are accurate geospatial data and printed maps to understand the world.
3. Geospace: natural resources such as region of outer space near the earth surface. Provide real world experience
4. Google lit trips: award winning supplementary reading resources which enable teachers and students use google earth to explain real world locations.
5. Map your memories: an art project created by Harvard graduate, Becky Cooper, to enable learners fill in outlines or maps of a place with information that is meaning to them.

A combination of these resources with creativity can produce best learning outcomes. For example, after a lesson the teacher can expose students to the immediate environment and trigger their thinking faculty by asking them to fill in details in a proforma as shown below:

1. Identify location of the area
2. Sketch map of the area
3. Attempt a background of the area's physical, cultural, socio economic activities of the people
4. State striking significance of the area
5. State the problems of the area
6. State the prospects of development
7. State settlement pattern and factors responsible for such settlement patterns

## Education

Nigerian Policy of Education (NPE) which is periodically reviewed to reflect the rapidly changing world view of life reflect the desire of the Nation to achieve greatness in science and technology much more than other sphere of human endeavour. Education is conceived as a formal process of learning brought about by means of a combination of processes involving but not limited to carefully drawn government policies, the execution of which is ensured through meticulous school administration and management and conscientious teaching - learning

activities. Education Sector Analysis ESA, co-sponsored by UNESCO (IFRN, 2005) document revealed the challenges of this form of education in Nigeria to include: non-distinct articulation of the non-formal route in NPE, lack of provision of such in Universal Basic Education, inadequate data and knowledge based issues, lack of regulatory control and lack of appropriate bridges and linkages with formal sector.

Section 1 paragraph 7b of the National Policy on Education for Nigeria emphasized the national educational goals to be the acquisition of appropriate skills and the development of mental, physical and social abilities and competencies as equipment for the individual to live in and contribute to the development of the society (FRN, 2004). Unfortunately, this vision is still a mirage especially in geography where some teachers are still lacking in content knowledge and skills to drive home their lessons. Hence, the invitation to geographic education.

## Geographic education

Geographic education refers to those geography perspectives, concepts and skills that are found in standalone geography courses and those diffused throughout and across other subject areas (Ogar, Awhen & Etim, 2017). It lays emphasis on field work, (NCGE, 2016). It requires students to participate in reading maps, asking geographic questions or displaying data. Geographic education is a necessary part of a complete education in view of the fact that geo spatial technologies including remote sensing and mapping tools have become critical to our economic success and governance in areas such as natural resources management, international commerce, transportation, risk management and national defense and security.

Geographic education is education about our world. A well-rounded geographic education provides young people with fundamental understanding of how the human and natural worlds work at local, regional and global scales. It is the intersection between the academic domains of Geography and Education in which a typology of research in geography education is developed and used to characterized its research (Bernardz, 2010). It is the way people learn about the different approaches to geography, develop skills to conduct geographical investigations, embrace the values associated with these approaches and practices.

Geographic education offers people opportunity to explore different life roles as they make decisions about geographical questions, issues and problems (Gerber, 2003). The development of these roles can take place on local, national and international and global scales. The international charter on geographical education identified the aim of geographical education in terms of the knowledge, skills, attitudes and values people will develop through its study and practice (Gerber, 2003).

The content or subject matter of geography as mentioned earlier is enormous. Professional geographers from the university had endeavoured to expose school

geography teachers to significant developments in the subject examples of these developments are geographical generalization, model building and spatial analysis, spatial geometry and measurement in geographical thinking and the organization and analysis of geographical data. These developments are more interesting but harder to teach so they demand teachers that are better educated (Ogar, 2020).

It is not uncommon to find some teachers avoiding such difficult concepts. If the teacher does not understand and accepts the concepts, they will never be firmly established in our schools. This calls for geographic education where the development and skills for geography teaching can be achieved through training and retraining programmes and constantly practicalizing these skills and principles before the learners. Principles are about acquiring relevant knowledge about students and using that knowledge to inform our course design and classroom teaching. They enable us know what is right, thereby outlining how we may or may not achieve our values. Blending passion with principles can improve the quality of teaching in the following ways:

- Make your expectations clear
- Make eye contact and address students by name
- Supplement lectures with hands-on-activities
- Recognize student's accomplishments and respond appropriately to their concerns.
- Draw connections between the course material and its real world applications
- Encourage peer tutoring in school and at home to boost learner's confidence (Corney and Rawling, 1985)

Thus geographic education improves knowledge and understanding of geography content, understand and use geographic skills and principles to help solve real world problems.

### **Tools in geographic education**

Geographic tools enhance teaching and learning of geography. Learning becomes more concrete when a learner sees and practically engages in activities relating to what he has been taught. The table below displays the various ways geographic tools can be used to achieve learning. The table shows tools and investigative questions often asked about the major themes in geography.

**Table 1:** Tools and investigative questions often asked about the major themes in geography

S/N	Tools	Query/Question	Task	Description
1	Maps	Where, what	Show location, Significance of Location	Use to show location, and its significance and lots of information. Use projection to try and display rounded object (earth) on a flat surface
2	Globe	What, where	Show size, area, shape, distances, direction, location	A model of earth which serve purposes like map but do not distort the surface that they portray except to scale it down
3	Atlas	What, where	Show place, region, charts	Book of maps containing more information about places included in the map. One atlas covers many maps. There are also in multimedia formats
4	Aerial photo	What	Show location, monitor changes in landscape	Photographs from space borne vehicles to provide information on ground features used to create maps. It aids better understanding of an area, Widely used for archaeological prospection and discovery of top soil characteristics
5	Satellite imagery	What, where	Show region, place location	Taken from space. Captures large area of the earth via space borne photography. Operated by governments and business around the world. Satellites are made by humans to gather information about the earth e.g Landsats, Geostationary operational environmental satellites (GOES)
6	Information graphics	What	Show pattern, Trend	Infographics are visual symbols of data that presents information quickly and clearly. It can be as simple as bar graph or complex as using a minute symbol to represent land cover change
7	GIS	How, where, what, why	Modeling, capture, store, displays information	GIS is more than a map. Conceptualized framework to provide ability to capture and analyze spatial and geographic data. Help geographers see all kind of information and how it relates to location. It combines information from several such as data bases, maps and satellite images in order to solve problems
8	Field work	What, where, How	Face to face contact with geographical phenomena	Fieldwork is learning from the real world outside the classroom. Involves direct personal observation in a particular location. Interviewing people, taking pictures making sketches and collecting samples
9	GPS (Global Positioning system)	What, where	Show exact location	A network of satellites and receiving devices used to determined location of something on earth. It equally provides velocity and time synchronization. It helps you get to where you are going, from point A to B

## Conclusion

Effort has been made to endear students and teachers into geography in the light of challenges of its beginning and later developments. These include the colossal content and subject matter of geography and later developments in school geographical generalization, model buildings and spatial analysis; spatial geometry and measurements in geographical thinking and the organization and analysis of geographical data. The geography teacher need to understand and accepts the concepts, blend them with passion and principles of teaching and learning outlined earlier. Daily and weekly practice in the use of geographic

tools tabulated above make learning more concrete. The future of geography obviously lies with geographers and what they make of it as Ojo (1981) rightly indicated. This amplifies what Wooldridge and East (1951) stated that “geography begins only when geographers start writing it. Therefore, this is an invitation for the legal structure and policy makers to enable the subject within the future framework of the school curriculum and to foster a persuasive rational within the whole curriculum. Geographic education will succeed on its different forms around the world through adopting the role of a bridge between the national sciences and Social Sciences and through implementing pedagogic initiatives herein suggested. This

will develop in learners, formally and non-formally, the capacity to lead social and community groups in making sensible decisions about people and their use of their environment.

Tinkler, K. J. (1985). *A short history of geomorphology*. London: Routledge Ltd.  
Wooldridge, S. W. & East, W. G. (1962). *The spirit and purpose of geography*. California: Hutchison University Library, 186

## References

- Bednarz, S. (2010). Geography education in journal of geography 1988-1997. *International Research in Geographical and Environmental Education*, 9 (2) 128-140
- Corney, G. & Rawling, E. (1985). Teaching slow learners through geography. The geographical association, Sheffield online [https://www on amazon.ae](https://www.onamazon.ae) at best prices, 87.
- Davies, D. V. (1969). *Nature*, ISSN 1476-4678 224, 294-295
- Eni, D. D. (2006). *Contemporary philosophy and methodology in geography*. Calabar: Tobson global resources.
- Faniran, A. & Okunrotifa, P. (1981) Preface. In Adetoye F and Peter O (eds) *a handbook of geography teaching for schools and colleges*. Ibadan: Heinemann educational books Nig plc,
- Federal Republic of Nigeria (2004). *National policy on education*. Lagos: NERDC press.
- Federal Republic of Nigeria (2005). *Education sector analysis*. <https://unesco.org>.
- Gerber, R. (2003). *Geography Education Faculty of Educational, Health and professional studies, University of new England, Australia Geo, 1. UNESCO Encyclopedia of life support systems sample chapters*.
- Gersmehl, P. J. (1996). *Why not here? Teaching geography to a new standard*. National Council for Geographic Education. US, Department of Education, 262.
- James, P. E. (1972). *All possible worlds, a history of geographical ideas*. New York: Odyssey.
- Kpolovie P. J. (2002b). *Utility of information technology in data analysis. Application of SPSS Trends in Educational Studies*, 1 (2) 52-56.
- Leigh, R. (1972). *Contemporary viewpoints*. Vancouver: Tantalus research limited.
- McHugh, E. (2015) *Teaching Geography to slow learners*. e journal [https:// ojs.Library.okstate.edu](https://ojs.Library.okstate.edu)
- National Council for Geographic Education (2016). *Explore the power of parks. Geography Awareness Week (GAW) Nov 13-19* [www.ncge.org/geography](http://www.ncge.org/geography).
- Ogar, T. O. (2020). *The geography teacher in post millennium Nigeria: Challenges and the way forward*. *Contemporary Multidisciplinary Journal of Research in Education, COMJRED*, 1, 2. University of Calabar press, 1(2). 358-364.
- Ogar, T. O., Awhen, V. O. & Etim, E. A. (2017). *Geographic Education for social change: The classroom environment perspective*. *South-South Journal of Education*, 1(1), 56-64. Calabar: Frontier Digital press.
- Ojo, G. J. A (1981). *Geography today: its purpose, contents and methods in Adetoye, F and Peter O (eds) A handbook of geography teaching for schools and colleges*. Ibadan: Heinemann educational; books (Nig) plc.
- Pearson, N. R. (1968). *Physical geography*. New York: Barnes and Noble Book. Division of Harper and Row pub.
- Pidwirny, M. (2006) 'History of physical geography'. *Fundamental of physical Geography* 2nd ed. <http://www.physicalgeography.net/Fundamentals/1e.htm/>
- Rawlings, E. M. & Daugherty, R. A. (ed.) (1996). *geography in the twenty first century*. Wiley <https://www.goodreads.com>. 422.
- Salau, A. T. (1986) *Geography in Nigeria*. *Professional Geographer*, 38(4), 417-419 Association of American Geographers.