CHALLENGES OF GEOGRAHICAL RESEARCH IN SUB-SAHARA AFRICA: A CASE STUDY OF NIGERIA.

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Abstract

Man does not longer ascribe natural phenomena to supernatural influences and no longer does he rely blindly upon accepted authority. Ever since man found himself on this planet (Earth), he has been bothered by many problems such as environmental, climatic, health, social, economic as well as political. However, for most of these problems, man has developed an orderly system of searching for solutions by passing conclusions upon factual evidence and by using logic as a means of findings. This research therefore uses phenomenological method to assess the nature of research in geography, challenges, and prospects and how it can be reposition. The paper recommended the need to train competence skilled research personnel and professionals in geographical research for national development in Sub-Sahara Africa.

KEY WORDS: Research in Geography, Challenges, Sub-Africa, National Development.

Introduction

Man does not longer ascribe natural phenomena to supernatural influences and no longer does he rely blindly upon accepted authority. He has developed an orderly system of Searching for the truth, by passing conclusions upon factual evidence and by using logic as a means of showing relationship between related ideas which has given him better and more accurate answers to his many questions. Ever since, man found himself on this planet (Earth), he has been bothered by many problems such as religious, environmental, climatic, social, economic as well as political (Olufunmbi, 2005). However, for most of these problems it requires "intellectualization", the scientific inquiry method which is heavily relied on and it incorporates logical reasoning. This orderly inquiry system is what is referred to as research (Brown, 2013).

The word 'research' is derived from the middle French word "recherché" which means "to go about seeking" or "to travel through or to survey". To a layman, research means finding out about a phenomenon of interest, but this finding out must be systematic and objective for it to be called a research (Amos and Danbala, 2015). According to Ituma (2015), research is a systematic inquiry into the status quo with the aim of finding better ways of solving problems. Nwogu (2012), defines research as the orderly investigation of a subject matter for the purpose of adding knowledge. It is referred to a formal, logical, systematic, objective and

intensive analysis and recording of carefully controlled observations that may leads to the development of generalizations or theories resulting in prediction and ultimate solution to problems. It can therefore implies an activity with a clear purpose in mind, namely, an activity, which results will contribute to, or constitute the solution of real problem.

Unfortunately, of recent, the quality of geographical research does not result to, or constitute to the solution of the problems that bothered man. This may be attributed to the fact that the intellectual scientific inquiry method is not heavily relied on. The objective of this paper is to look at the research training programmes and equipment use in Sub-Sahara Africa, using Nigeria as a case study. The paper therefore uses phenomenological method to assess the nature and challenges of geographical research in Sub-Sahara Africa and how it can be repositioned for national development.

Nature of Research in Geography

Geography as a discipline is concerned with identification, analysis and interpretation of spatial distribution of phenomenon on the earth surface over time. Geography utilizes scientific research method and procedures to produce result similar to other scientific disciplines. Basically, the nature of research in geography involve the application of scientific methods in the study of problems. It is a systematic attempt to obtain answers to meaningful questions about phenomena or event through the application of scientific procedures (Anikweze, 2012). In geography according to Adedokun and Ejeh (2009), there are approaches or stages to research. These stages include:

- **OBSERVATION**: A geography research starts with the observation and identification of a problem in the environment that is in need of solution. The problem indentify must be clearly defined in such a manner that observation or experimentation in the scientific world can provide solution.

- **Definition of Hypothesis**: In geography, once a problem is identified or defined the next step is to formulate the hypothesis. Hypothesis is an intelligent guess for the solution to the problem indentified. That is, a tentative solution of the problem under investigation. It requires a critical review of knowledge or information related to the problem or geographical phenomena under investigation and deduces the implication of the suggested hypothesis that is what would be observed if the hypothesis is true.
- **Data Collection**: Data collection in geography according to Brown (2013) is of two main sources, based on whether the data was collected by oneself from the source of the data (Primary source). To collect primary data, researchers in geography can use any of the following methods; interview, administration of questionnaires or observation of geographical features of interest. The second method is using data already collected by others (secondary source).
- **Analysis and Synthesis of Data:** After data collection from the primary, secondary or both, the next stage of research in geography is to analyse the data. Data analysis refers to the strategies or procedures for summarizing or exploring the relationships among variable on which the data have been collected (Adedokun and Ejeh, 2009). The process of data analysis and synthesis in geography include ;
    - ✓ Organization e.g putting down ideas, filing, indexing, referencing e.t.c
    - ✓ Manipulation e.g tabulation, statistical analysis, machine processing or cartographic analysis.
    - ✓ Consideration or Explanation e.g explanation of relationships between variables or explanation of what happens when a third variable is added.
- **Writing of Research Report**: Research report writing is one of the most important parts of research in geography. It involves communicating results of research findings. The nature of the report, forms, styles, language, length and the scope varies

with the intended audience, e.g in academics they are interested in any contribution to knowledge, while the general public want anything that is new.

They further observed that these stages could be broken down into about ten (10) steps as follows:

Statement of the problem
↓
Survey of literature
↓
Formulation of hypothesis
↓
Identification of data
↓
Sampling design
↓
Analysis of data (Direct or statistically)
↓
Cartographically
↓
Synthesis of data to test hypothesis
↓
Conclusion
↓
Theory construction

Characteristics of a Good Research in Geography

Research generally and particularly in geography can be characterized in several ways. Some of the characteristics of a good research in geography as observed by Blunt and Souch (2006) include:

- It is directed toward the solution of a problem, that is, it involves the quest for answers to unsolved problems.
- It is based upon observable experience or empirical evidence, rejecting revelation and dogma as methods of establishing knowledge.
- Geographical findings must be tentative, verifiable and replicable.

- Geographical research must involve careful collection, organization and articulation of what is already known about a problem and what is yet to be known.
- It must be a careful structured process and careful designed procedures, which follows a systematic order or rule of execution.
- Geographical research is characterized by rigorous logic and objectivity in a carefully designed procedures and analysis.
- It must demands accurate observation and description of geographical phenomena, using quantitative or qualitative measuring devices.
- Geographical research involves gathering of new data from primary or first-hand sources or using existing data for new purposes.
- It must be replicable and emphasizes the development of generalizations, principles, or theories that can be used in predicting future occurrences.
- Geographical research must involve expertise. It knows what is already known about a problem and how others have investigated it.

Challenges of Geographical Research in Sub-Sahara Africa

Following the recent dramatic rise in the global interest by individuals, Head of government, and Non-governmental organizations in geographical research and the yawning desire to find solutions to environmental problems of drought, flooding, desert encroachments, coastal erosion, ozone deflation, global warming and climate change, the developing nations of Africa such as Libya, Guinea, Nigeria, Chad, Niger, etc are facing an unprecedented shortage of competence in research skilled personnel require to support such a massive interest and yarning desire to find solution to these environmental problems which Sub-Sahara Africa seems to be the most hit.

It was observed by Dogo (2002), Obtero (2004) and Okafor (2001) that the current shortage of competence in research skilled personnel in geographical research could hinder the academic sector's contribution to national development in Sub-Sahara Africa, considering the African Union (AU) and the various Head of government plan to diversify the economy. The shortage of competence research skilled personnel in geographical research can be attributed to;

- Poor research training in Sub-Sahara African Universities and other higher institution of learning.
- Inadequate exposure to high-technical geographical research equipments such as Geographical positioning System (GPS), Multi Spectral scanner (MSS), Thermal Infrared Scanner (TIS), Lab-band Radiometer, Aerial Photographic Camera (APC) etc.
- Low level of awareness on the latest trend of geographical research in sub-Sahara Africa.
- Outdated research curriculum
- Low level of Sub-Sahara African youth's interest to pursued career in geography.
- Poor geographical training and certification in Sub-Sahara Africa.
- Inadequate skills in Information and Communication Technology (ICT).

The shortage of competence research skilled personnel in geographical research in sub-Sahara Africa, according to Otuka *et al* (2014), are seen to be more acute in the area of; formulation of research problem, testing of hypothesis, multivariate investigation, observing geographical phenomena, skills in Information and Communication Technology and writing geographical research reports.

Prospects of Geographical Research and National Development in Sub-Sahara Africa

If geographical research is properly reposition it findings will be highly significant and it will serve as an important tool for policy makers, administrators environmental planners, academicians, and other environmental scientist in discharging their duties for national development in Sub-Sahara Africa. It provide data and information which can be used for solving environmental problems of drought, flooding, global warming and climate change as well as improving environmental process.

Other prospects of research in geography according to Blunt and Souch (2006) and Olayinka *et al* (2006) include:

- Acquiring of knowledge and learn to think and solve problems.
- Generation of new geographical theories and confirmation of existing ones or disprove them.
- Providing answers to unresolved questions in geography or to push back the frontiers of ignorance.
- The results and findings of researchers can be added to the pool of data which are much required for planning and national development.
- It helps in the advancement of knowledge in geography and to increase understanding of geographical phenomenon.
- Participation in geographical research provides training in problem –solving as well as in leadership.
- Continuous professional growth of teachers and teaching is enhanced by reading geographical research reports.

Recommendations

Looking at the prospects of research in geography and shortage that exist in the area of competence research skilled personnel, it is recommended that:

- There is the need for a periodic training and retraining of geographers in the area of research.
- An improvement in the quality of teaching and research training in Sub-Saharan Africa Universities and other higher institutions of learning.
- High level of awareness should be created on the latest trend of geographical and general environmental research.
- Updated geographical curriculum to meet the latest global research procedures.
- Researchers in geography should be exposed to high -technical geographical research equipments such as the I.C.T, A.P.C, M.S.S, T.I.S etc.

Conclusion

At whatever level a research is been carried out, it is aim at solving a problem. The researcher therefore needs certain research competencies, skills, enabling behaviours and certain personality attributes essential for the investigation of a particular geographical phenomenon. It is also good to point out here that another outcome of the shortage of competence skilled personnel in geographical research is that, the overall contribution of geographical studies to the productivity of other critical sector of the economy in Sub-Saharan Africa such as in health, agriculture, industry, mining and water resources will be severely hampered. Most importantly, without the requisite research skills set in place to support the massive and dramatic rise in global interest in geographical research is a waste (Okafor, 2002).

Conclusively, there is the need to train more competence research skilled personnel and professionals over the next ten (10) years in Sub-Sahara Africa to reposition geographical research if the region intends to meet it massive growth interest in finding solution to the environmental problems that are becoming a threat not only to Africa but the world at large.

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