

Desired Inclusions in the Nigerian Secondary School Geography Curriculum In The Face Of Global Challenges for Sustainable National Development

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Abstract: *The paper examined the desired inclusions in the Nigerian secondary school geography curriculum in the face of global challenges for sustainable national development. Three research questions guided the study which adopted Ex-Post-Facto design/unstructured interviews as method of data collection based on Geography curriculum and inputs of experts. The data gathered was descriptively analyzed and presented in tables. The study findings revealed that there are essential contents of the geography curriculum that need to be taught using students' activity-based methods; that there are some other contents that need to be included and methods of studying them to re-position geography in the face of global challenges for sustainable national development. The paper revealed envisaged challenges in the study of these new inclusions and proffered solutions to mitigate them. Implications were drawn and recommendations made to make geography indeed a tool for national development.*

Key words: *Desired inclusions, Geography curriculum, Nigeria; Global challenges, Sustainable national development*

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I. Introduction

Education is a basic force for the socio-economic and political transformation of any society. [1] reiterated that no nation can develop to its fullest and keep pace with modern societal trends in science and technology without an effective educational system. In essence, education should prepare us for a changing society and should itself generate social change. [2] pointed out that old problems no longer respond to old solutions; therefore we need to ensure that our children are adequately prepared today so that they may find suitable answers to meet the needs and challenges of tomorrow. The need for change in our curricula contents and methods becomes imperative.

The changing world requires a dynamic curriculum that should be innovative. This type of curriculum should be responsive and characterized by an understanding of the anticipated political, economic, natural and socio-cultural setting [3]. In essence, the need of the society keeps changing from time to time; so teachers need to keep abreast of these changing trends in order to make learning experiences real, relevant and worthwhile for the learners. The society is in constant change in order to meet up with national sustainable development. The curricula content and methods of various disciplines go through changes in accordance with the economic and natural trends locally and globally. This is in line with one of the stipulations of the Federal Government of Nigerian in its National Policy on Education (FRN, 2013:14) on goals of education thus: ensuring periodic review for effectiveness of the curricula at all levels of education to meet the needs of the society and the world of works. The need for these changes has necessitated the present study on the desired inclusions in the study of geography in Nigerian secondary schools in the face of global challenges for sustainable national development.

Geography is a discipline which uses scientific methodology in finding answers to problems generated through interaction of man in his physical and social environment [4]. [5] stated that geography is interested in the study of the temporal database distribution of phenomena, processes, features as well as the interaction of humans and their environment. The author perceived the subject as an interdisciplinary discipline linking many other subjects as it relates to man and his interactions with planet-Earth; hence an integrating subject. [6] reiterated that Geography as an integrative subject describes the spatial aspects of interactions between human and the natural world; so it requires a proper understanding of the interactions in order to guide humans aright to maintain equilibrium in the environment.

The value of geography is embedded in two of the Nigerian national objectives as stated in the National Policy on Education (FRN, 2013) thus: The training of the mind in the understanding of the world around and the acquisition of appropriate skills, abilities and competences, both mental and physical as equipment of the individual to live and contribute to the development of the society. Based on the above national objectives, the

Nigeria education, Research and Development Council (NERDC) (2007) developed the geography curriculum and enlisted its objectives thus; to:

- Understand the concept of man–environment relations;
- Appreciate and develop a sense of responsibility towards one’s own society and intelligent interest in the formation of national goals and policies, especially as they influence the different resources and regions of the area;
- Develop sympathetic understanding of the people of other land and
- Organize and formulate principles according to acquired geographic concept which they can use to analyze and interpret spatial problems in their immediate and wider environment (p.56)

Geography as can be seen in the above enlisted objectives plays a key role in National development. As a subject that deals with man and his interactions in the environment, it needs special attention in its teaching and learning, especially in the face of the present global challenge of climate change. Climate change has led to the depletion of the protective layer-(Ozone layer) because of man’s negative interactions in the environment like flooding, extensive heat radiation among others. According to [7] climate change initiatives, there is the urgent need for re-training of school personnel on curriculum review and reform. This initiative was based on the fact that what children learn today will shape tomorrow’s world. So there is the need to equip teachers on how to prepare learners with the knowledge of climate change and its consequences on man and his environment in order to maintain sustainable environment. [8] advised that the contents and methods of geography should be beefed up with relevant materials and information from learners’ immediate environment and adapt the curriculum to their needs and aspirations for sustainable national development. This sincere yearning in the light of the global challenges has necessitated the present study.

Statement Of The Problem

Geography deals with the study of the Earth as the home of man; hence man’s interactions with the environment needs special attention. Of recent, man’s interaction pattern have had adverse effects on the environment and this he does ignorantly. Presently, the presentation of geography contents and methods have not helped issues as youths trained with the present geography curriculum as it is cannot make any significant impact on the economic and natural environment of Nigeria. Certain basic areas and methods that ought to be in geography curriculum are not there for significant national development. This is worrisome and has led the researcher to the present study that thus asks; what are the desired inclusions in the study of geography in Nigerian Secondary schools in the face of global challenges for sustainable national development?

Purpose Of The Study

The main purpose of the study was to x-ray the desired inclusions in the study of geography in Nigerian secondary schools in the face of global challenges for sustainable national development. Specifically, the study investigated the:

1. Basic aspects of geography contents and suggested methods of teaching them.
2. New inclusions and methods of teaching them for sustainable national development and
3. Envisaged challenges/the way forward in the study of the new contents and methods for sustainable national development.

Research Questions

The following research questions guided the study:

1. What are the basic aspects of geography contents and suggested methods of studying them for sustainable national development?
2. What are the new inclusions and methods of studying them for sustainable national development?
3. What are the envisaged challenges in the studying of the new contents and methods for sustainable national development?

II. Method

Design of the study: The study adopted Ex Post Facto design type that concentrated mainly on special review of geography curriculum (2007). A thorough analysis of the document was done to unravel basic contents and new methods to study them. Again, skeletal interviews/viewpoints of geography experts at secondary and tertiary education levels were done to substantiate the findings of the study.

Method of data collection: The main method used here was a thorough examination of the geography curriculum in addition to the responses of experts’ viewpoints in line with the research questions

Method of data analysis: The gathered data were descriptively interpreted using tables and commentaries

DATA PRESENTATION AND ANALYSIS

Table 1 presents the data that answered research question 1

Table 1: Basic aspects of geography contents and suggested methods of study

S/N	Theme	Sub-Themes	Suggested Inclusions (Methods/Activities)
1	Population and its control in Nigeria	Population size, Distribution; population movement; and population control measures.	<ul style="list-style-type: none"> Group fieldwork on sizing population in the locality Public enlightenment on need to control population.
2	Communication in Nigeria and transportation	Transportation/communication networks/problems of transportation/communications on man and environment	<ul style="list-style-type: none"> Interactions with network providers and transporters. Monitoring communication and transportation activities. Practical work/suggestive measures to curb environmental abuse.
3	Industrial, commercial and manufacturing activities	Major industrial zones; factors of industrial location; manufacturing process and problems	<ul style="list-style-type: none"> Visits to industrial/commercial sites in groups. Suggestions through public enlightenment and commercial activities procedures; Suggestive legislations for commercial activities operations. Proffering solutions for preventive and curative measures on problems of commercial activities.
4	Agriculture in Nigeria	Types; food and cash crops; importance of agriculture and problems associated with agriculture; improved farming techniques	<ul style="list-style-type: none"> Excursions to major agricultural sites Brief chats with major agriculturalists Suggested patterns of agriculture based on soil types. Tips to prevent land abuse/problems.
5	Settlements in Nigeria	Types; factors of settlement; settlement pattern; settlement interactions. Problems of settlement patterns/interactions	<ul style="list-style-type: none"> Miniature protect on selected settlement patterns Brief charts with community leaders on how to improve settlements and interactions in their locality Proffering solutions to settlement problems
6	a. Resources of Nigeria. b. Renewable and non-removable resources	Mineral resources, power resources; water resources,	<ul style="list-style-type: none"> Field work to sites of important resource. Discussion with managers of resource sites on caution in their use Monitoring operations of resource extractions/suggestions on better methods.
7	a. The Environment b. Environmental resources c. Environmental problems d. Environmental conservation	Atmosphere, lithosphere, biosphere and hydrosphere importance of the environment, meaning types and importance to man Types, causes and effects on human activities Meaning, methods like afforestation; reforestation cover cropping	<ul style="list-style-type: none"> Group project on environmental watch for a week Chats with managers/traditional leaders on environmental resources and problems noticed Debate groups on environment and its resources. Suggestions to authorities on the environment and its resource use.
8	Land reclamation	Meaning; reclamation methods afforestation; construction of barriers; sand filling; construction of drainages and control of erosion and flooding	<ul style="list-style-type: none"> Field work to sites being reclaimed Discussions with authorities for future prevention of environmental degradation. Debates/legislation on land use management
9	a. Weather and climate b. Climate change	Elements; attributes; importance; affecting factors; effects of weather and climate; physical /human activities; Causes, consequence and remedies	<ul style="list-style-type: none"> Group project on weather and climate; weather watch for a month. Class discussions on group's observed weather patterns and variables Charts with elders in the communities on their views on weather variables and solutions Suggestions on climate change prevention and adaptation
10	ECOWAS	Mandate and solution to problems	<ul style="list-style-type: none"> Debates on inter-unity relations of ECOWAS countries and security challenges and their handling Interviews with key government officials on key issues that affect ECOWAS
11	a. Basic concepts of geographic information system (GIS) b. GIS components c. GIS application	<ul style="list-style-type: none"> Geographic data; meaning and examples; importance of geographic data, Referencing and GIS Hardware; software, data; procedures and people Area of use defense; agriculture; urban development; mapping/surveying; transport and 	<ul style="list-style-type: none"> Visits to GIS offices in areas near the school. Practical on working with G.I.S. data and equipment Debates on the best way to use G.I.S. in various sectors for sustainable development.

		census.	
12	Satellite remote sensing	<ul style="list-style-type: none"> • Definition and processes • Application of satellite remote sensing- forestry; environment; agriculture, transportation and emergency response • Relationship between remote sensing. 	<ul style="list-style-type: none"> • Field work to sites where remote sensing is application • Discussions with relevant authorities in its effective applications • Monitoring the process of satellite remote sensing in a given area and writing a report based on it.

(Source: NERDC’ 2007; Fieldwork data, 2016)

Table 1 presents the data that answered research question 1 based on aspects of geography and suggested methods of teaching them. Basically, these major aspects deals with economic and environmental contents which are the bone of contention in Nigerian like the population, communication, industries, agriculture settlements; environment and its resources; weather and climate, climatic change; ECOWAS; GIS and Satellite Remote Sensing. These are key areas enlisted in the geography curriculum. Major suggested methods include: debates; discussions; group projects, legislations; interviews; suggestions; proffered solutions and practical/field work activities. These methods were not captured in the curriculum and this has necessitated their inclusion to make geography indeed a tool for sustainable national development.

Table 2 presents the data that answered research question 2

Table 2: New contents inclusions and their suggested methods

S/N	Theme	Sub-themes	Suggested inclusions (methods/activities)
1	Population Control measures in Nigeria	<ul style="list-style-type: none"> • The need for the measures • Public enlightenment; effective moral measures 	<ul style="list-style-type: none"> • Research studies on students’ extended family system. • Group work on population control measures • Debates on effects of over-population.
2	Problems of commercial activities in Nigeria.	<ul style="list-style-type: none"> • Monitoring pattern of commercial activities • Legislative measures for commercial activities • Handling emanating problems from the activities 	<ul style="list-style-type: none"> • Discussions with authorities involved in commercial activities on mode of operation and cautions • Legislations; suggestions/proffering solutions on prevention/control of effects of commercial activities.
3	Problems that emanates from agricultural activities	<ul style="list-style-type: none"> • Land use watch; public enlightenment; caution to framers; • Emanating problems and control 	<ul style="list-style-type: none"> • Monitoring of land use for agriculture in designated areas and reporting the findings • Meeting/discussions with agriculture experts, farmers and communities on the best agricultural land use practice to avoid abuse.
4	a.Environmental resources b.Caution in their use	<ul style="list-style-type: none"> • Establishment of resource use decrees; • Monitoring resource use; • Cautions in resource use for sustainable environment. 	<ul style="list-style-type: none"> • Debates on environmental resource exploitation; • Suggestive legislations to government on environmental resource usage. • Field work on environmental resource usage/discussions on the way forward.
5	Geography room and its creation	<ul style="list-style-type: none"> • Nature of geography room; • Modelling in geography • Equipment and the management of geography room 	<ul style="list-style-type: none"> • Students assigned duties periodically on the management of geography room. • Practical on modelling of phenomena • Practical on the use of various aspects of the room.
6	Meteorological station operation(Met. Station)	<ul style="list-style-type: none"> • Definition and importance • Need for weather watch in the station; • Equipment/instruments and their use • Handling meteorological station materials, 	<ul style="list-style-type: none"> • Observation by students in a nearby Met. Station • Discussion with authorities on forecasting patterns • Practical on reading/ interpreting Met station instruments • Debates/discussions on the best use of Met. Station for weather predictions
7	Cartography and its involvements	<ul style="list-style-type: none"> • Definition and importance of cartography; • Cartographic instruments and their maintenance; • Hands-on-practice in cartographic involvements/usage. 	<ul style="list-style-type: none"> • Students identifying cartographic equipment available; • Hands-on-practice on manipulating cartographic equipment to produce charts and maps. • Group projects in the production of

			maps/charts for school use.
8	Land- scaping/survey	<ul style="list-style-type: none"> • Definition and importance of landscaping survey • Landscaping/survey equipment • Practical on the survey/landscaping processes. 	<ul style="list-style-type: none"> • Field work on possible land survey/scaping sites in and around the school. • Identification of equipment and its proper usage • Hands-on-practice on the use of equipment • Group project on the production of survey plans and landscaped environment in and around the school.
9	Ecosystem watch (Ecological system)	<ul style="list-style-type: none"> • Definition and importance of ecosystem, • Pattern and sensitivity of the ecosystem • Procedure for ecological fieldwork/observations. 	<ul style="list-style-type: none"> • Practice on given portion on ecosystem monitoring, • Debates/writing of reports on ecological system to avoid abuse of the biotic and abiotic aspects. • Group project on observation of an assigned area to watch degradation/proffer solutions.
10	Economic geography	<ul style="list-style-type: none"> • Importance of economic geography • Economy of Nigeria in brief • Diversification of Nigerian economy • Human resource management and training for enhanced economic development 	<ul style="list-style-type: none"> • Debates/discussions on the state of economy of Nigeria dependence on oil (mono-economy). • Discussions with authorities on how to diversify the economy of Nigeria • Suggesting legislative measures on economic diversifications • Writing a report/debate on disadvantages of mono-economy and advantages of multi- economy

(Source: Field work data, 2016)

Table 2 presents new contents and suggested methods of study to be included in geography curriculum for study. Items 1, 2, 3 and 4 on population; commercial activities agricultural activities and environmental resources were enlisted in the curriculum, but the aspects in the four items were not there; hence their inclusions now. Items 5-10 on geography room; Meteorological station; Cartography; Landscaping/survey; Ecosystem watch and Economic geography were not included in the curriculum and have necessitated their inclusions. The table also presented suggested methods/activities of studying them which include: discussions; debates; observations; fieldwork, legislations and hands-on-practice, among others. These methods were not included in geography curriculum and most of the activities were teacher-centred.

Table 3 answered research question 3

Table 3: Envisaged challenges and the way forward in the study of the suggested geography contents and methods

S/N	Envisaged Challenges	The Way Forward
1	Elective nature of geography in Nigerian secondary schools makes students to shy away from its proper study.	Geography to be made compulsory in the Nigerian curriculum
2	Dearth of Geography teachers in the Nigerian classrooms	Boosting the morale of individuals who wants to specialize in geography by giving them scholarship /bursary awards.
3	Lack of proper capacity building of the few geography teachers to impart the enlisted contents and methods properly.	Need to regularly organize workshops/seminars for geography teachers and would-be geography teachers to enhance them.
4	Dearth of geography equipment in secondary and tertiary institutions in Nigeria for proper study of geography.	Need to equip secondary and tertiary institutions' geography laboratories with up-to-date facilities for proper study.
5	Problem of not integrating geography related contents in the G.S.T curriculum student teachers are exposed to in tertiary institutions in Nigeria	A re-think on beefing up the G.S.T contents student-teachers are exposed to in order to equip them to be conscious of the environment and to impart same to learners.

(Source: Fieldwork data, 2016)

A look at Table 3 shows the envisaged challenges in the study of the enlisted contents and methods and the way forward. They include: geography enlisted as an elective subjects in item 1; dearth of geography teachers and lack of capacity building of the few in the secondary school system as can be seen in items 2 and 3 respectively. Furthermore, items 4 and 5 highlighted problems of dearth of geography equipment and non-inclusion of geography contents in the G.S.T curriculum student-teachers are exposed to respectively. The table also presents the way forward to handle these challenges in items 1-5, like: making geography a compulsory

subject in secondary school; giving of scholarship/bursary awards to individuals that wants to study geography in universities; organizing workshops to enhance the capacities of the available geography teachers; proper equipping of geography laboratories in secondary and tertiary institutions in Nigeria and beefing up the G.S.T contents student- teachers are exposed to in universities with basic geography contents to make them environmentally friendly and sensitive. If these challenges are given due thought and the suggested remedies considered, the teaching and learning of the new methods/contents would be feasible for sustainable national development.

III. Discussion

The study has been considering desired inclusions in the study of geography in Nigerian secondary schools in the face of global challenges for sustainable national development. Table 1 presented 12 basic areas in the geography curriculum that make impact in the economic development of Nigeria and her environment. The need to properly study these areas by students in secondary schools in Nigeria is important. The problem was that the methods enlisted for their study were teacher- based as can be seen in the geography curriculum. Students' activities were the passive types like listening; help teacher to explain points; observe certain given areas, etc. as can be seen in the curriculum on pages 30 and 52. These methods do not encourage learning and active participation by students; hence the need to re-visit the methods which include: discussions; debates, observations in the field to monitor on-going processes and activities; contributions in legislations; hands-on-practice among others. These methods makes for active learning by students and they are in line with the view of [9] that proper learning by students will bring about desired behavioural changes and experiences for proper acquisition of new ideas, skills, values and knowledge. This is learner- centred approach of the pragmatist theorists which [10] acclaimed that when students are placed at the centre of learning, they develop creativity to tackle challenges around them. These findings were further backed up by Jim (2010) views who reiterated that for students to survive in this globalization era, innovative pedagogy must be used to build and develop creativity in their value system. The 12 contents lifted from geography curriculum (2007) are appropriate in the handling of global challenges. The needed inclusions is in line with the yearnings of the Federal Government in its National Policy on Education [11] of ensuring periodic review of the curricula at all levels of education to meet the needs of the society for sustainable development.

Table 2 presents the data that answered research question 2 on new content inclusions and methods of studying them. A good analysis of the NERDC Curriculum of Geography (2007) showed that items 1,2,3,4 respectively were not captured under their major topics reflected in the curriculum i.e. population control measures; problems of commercial and agricultural activities and caution in the use of environmental resources; this has necessitated the capturing of these aspects. Items 5-10 on geography room; meteorological station; cartography; land-scaping/survey; ecological system watch and economic geography are not there at all and this is worrisome because, they are key areas that touch on the environment and the economy of Nigeria; hence the need for their inclusions. This is in line the views of [12] who stated that for any meaningful development to occur in any nation, it needs individuals who have gone through specialist training to solve national problems as the emerge. Table 2 also presents the suggested methods of studying these new contents like discussions with authorities/stakeholders and hands-on-practice among others. Supporting these findings, [13] suggested that geography as an explorative subject should involve active fieldworks by students and to include areas like: research studies; group works; field observation; debates; interviews; discussions with authorities; observe and record phenomena as they occur. The group reiterated that active participation by students makes them to be interested and to retain information. Again, [14] emphasized the need to enrich the contents of geography with relevant materials and information from learners' immediate environment and gear them towards their needs and aspirations for relevance.

Emphasizing the need for active learning by students, [15] made it clear that students by nature are curious and need to be actively involved in the learning process; that by so doing, they are equipping, testing and building their own personal constructs and knowledge for effective learning. It then means that teachers in the geography class need to combine a lot of methods and materials and practicalize concepts in order to make the acquisition of contents interesting and easy for the students to put them into practice.

Finally Table 3 presents the envisaged challenges in the study of the new suggested contents/methods and the way forward. These challenges include: elective status of geography in secondary school curriculum; scarcity of geography teachers cum lack of capacity building of the few available ones; dearth of geography equipment and non-enrichment of student-teachers in universities with geography contents in their G.S.T courses to help them teach students in the Nigerian classrooms. These findings agreed with the view of [16] that teachers as transformation agents need to be developed properly in order to build students up to drive sustainable national development. Again [17] stated that for students' interest and attention to be captured, there must be modern instructional materials presented to them. [18] emphasized the need for conducive environment for teaching and learning which involves enough classrooms and teaching materials among others. Also, the

Federal Government of Nigeria desire to have competent teachers who will pilot national development when it stated in its National Policy on Education (2013:56) that they will be provision of teachers with intellectual and professional background adequate for their assignment.

The paper in Table 3 suggested remedies to these challenges like: making geography a compulsory subject in secondary schools; attracting more people to study geography through incentive schemes; re-training of the available geography teachers and beefing up the G.S.T contents in universities that student-teachers are exposed to with rich geography contents. In line with these suggestions, [13] reiterated the need for good welfare scheme for teachers to motivate them; these should include: training programme; beefing up teacher education programme and providing basic facilities in our educational institutions. Once capacities of geography teachers are built and equipment for teaching provided, they can develop interested geography learners who can sustain national development as enlisted in the national objectives of education (FRN, 2013) and the NERDC (2007:56) objectives of geography education

Educational Implications of the Study

The present study has obvious implications:

- The method and activities enlisted in the geography curriculum are teacher-centred and cannot lead to proper study of geography to drive national development.
- There is non- practicalization and proper field work study of geography contents and this is affecting its proper study.
- There are essential contents /methods that need to be introduced in the study of geography in Nigerian secondary schools that will help learners to be national developers in future.

IV. Recommendations

Based on the findings of the study and the implications drawn, the following recommendations are made:

- There is the urgent need for NERDC to beef up geography contents and the methods of studying them as suggested in this paper.
- From hence forth, all activities in the geography classrooms should be learner-centred based on fieldworks and hands-on-practice.
- Incentive schemes should be mounted by various States and Federal Government to attract more people to the study of geography and to re-train the few available teachers handling the subject for sustainable national development.
- The Federal Government of Nigeria needs to reconsider making geography one of the compulsory subjects in Nigerian secondary schools in the face of global challenges.
- Various university authorities should have a re-think on including geography contents in the G.S.T courses for training student-teachers to build up their capacities in issues of national development.
- Various States and Federal Governments need to equip geography laboratories in their secondary and tertiary institutions for proper study of the discipline for national development.

V. Conclusion

Geography as the study of the earth as a home of man is a great tool for national development; hence the need for the study that examined the desired inclusions in its study in the face of global challenges for sustainable national development. The study findings showed that there are basic contents in the curriculum that need to be properly studied using activity based methods; new contents that need to be added and the suggested methods of study studying them. Lastly, the study highlighted obvious challenges in the study of the new contents and their methods, but put forth the way forward in handling them. The various governments in Nigeria need to give serious thoughts to the suggested contents/methods and proper handling of the envisaged challenges to reposition geography as a discipline for building national developers.

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