



AN ASSESSMENT OF THE AVAILABILITY OF GEOGRAPHY TEACHING AND LEARNING FACILITIES IN SCIENCE COLLEGES OF KANO STATE, NIGERIA

¹Ibrahim Sani Yakubu and ²Garba Shu'aibu

¹Department of Science Education, Federal University Dutsin-Ma

²Department of Science and Technical Education, Bayero University Kano.

ABSTRACT

The study investigated the availability of Geography teaching and learning facilities in Science Colleges of Kano, Nigeria. The aim of the research was to take inventory of Geography facilities and ascertain their influence towards teaching and learning the discipline. A survey study was adopted for the 10 Science secondary schools in the state with a combined population of 7378 Geography students. Teachers' population comprised 34 Geography teachers. Observation Checklist (OCL) was used to take inventory of available facilities. Five persons were used for the validation of the instrument they include: supervisor, lecturers in science and technical education and the geography department, Geography teachers in secondary school, language department. a Pilot study was conducted using Split Half, Teachers' Question and Students Questionnaire reliability index computed at 0.880 and 0.799 respectively the using Spearman-Brown Coefficient Equal Length Correlation. Frequency distribution table and simple percentage were used to answer the research questions. The findings of the study show that too wide a Geography Curriculum as well as inadequate learning facilities are the problems affecting teaching and learning Geography and Organizing Fieldtrip/Excursion is the way of improving learning Geography. It is therefore recommended among others, that educational stakeholders should reduce the scope of the Geography Curriculum as well as make provision of adequate learning facilities. Educational stakeholders should contribute in organizing fieldtrips/excursions.

Keywords: Geography, Sciences, Facilities, Tools and Teaching

INTRODUCTION

The Geographical concepts of place, space, environment, interconnection, scale, sustainability and change are integral to the development of geographical understanding. They are ideas that can be applied across the subject to identify a question or guide an investigation. They are the key ideas involved in teaching students to think geographically. Apart from the general philosophy and goals of education in Nigeria, the goals of secondary school education are all about the

preparation of the target students for useful living within the society and higher education. Geography deals with spatiotemporal phenomena, objects and events. It studies the natural and socio-cultural environments of mankind. It has a wide scope consisting of the elements of the pure and social sciences to develop good citizens capable to solve economic, social and political problems of the country. Therefore, the subject has the potential capacity to achieve the two broad goals of senior secondary education, which are stated in section, five (5) of National Policy on Education (2014, p.13), such as to prepare the individual for; Useful living within the society and Higher Education.

The SSCE results of WAEC and NECO suffer from devastating mass failure undoubtedly as confirmed by many researchers from various disciplines (Bunkure, 2012; Nbina, 2012; Salman, Mohammed, Ogunlade & Ayinla, 2012; Matawal, 2013). As a secondary school subject, Geography is not exclusive in the massive failure. This was clarified by Kano Education Resource Department. Salman, Mohammed Ogunlade & Ayinla (2012) grouped the problem responsible for mass failure into seven categories. Students' problems, such as belief that Geography is a difficult subject, lack of frequent practice of the practical portion of the subject, hatred for Geography teachers, lack of interest in the subject, poor background in relevant fields of the subject, the negative influence of peer groups, laziness and so on. Students generally have appreciable interest in geography. However, the acute shortage and low quality of geography teachers, which translate into poor teaching of the subject, are therefore factors in its attrition among students, inadequate teaching materials, facilities and aids as well as the wide scope of the syllabus were also identified as factors of attrition in the subject (Rilwani, Akahomen and Gbakeji 2014). Therefore, in view of the above findings, this study is aimed to investigate into the problems of teaching and learning Geography in Science Colleges, in Kano, Nigeria.



REVIEW OF RELATED LITERATURE

Science Colleges in Kano State

The establishment of science secondary schools in Kano state was born out of the conspicuous need of science and technical manpower in the 1970s. After the creation of Kano state in 1967, the state was faced with lack of indigenous manpower in science and technology to meet up with its anticipated expanded social development. To overcome the challenges, the need to establish Kano State own special science secondary schools was suggested, with the sole aim of training science students and producing professionals in science and technology on a long-term basis to compliment the efforts of meeting up with the manpower challenges of the state. This suggestion was proposed by an eighteen member Manpower Development Committee headed by Dr. Ibrahim Ayagi in 1975. Subsequently, in April 1977, the Military Governor of Kano State, Colonel Sani Bello, approved and announced the establishment of Science Colleges.

The schools selected for conversion into Science Colleges were the secondary schools at Dawakin Kudu (originally established in 1975) and Dawakin Tofa (1972). Each of these schools was well built and located in a pleasant rural pasture land. The Dawakin Kudu School was also relatively new at the time (1977) and built with financial assistance from the United Nations Development Project. But most significantly, both were exactly the same short distance away from Kano metropolitan (32 kilometers). This was important to the planners of the Science Colleges project because they did not want to locate the schools too far from Kano, at that would make them unattractive places to work for teachers, especially expatriate staff. As the First Executive Secretary of the Science Board explained, "the two schools (Dawakin Kudu and Dawakin Tofa) were selected because we wanted schools that were very close to Kano, where we can literally leave office now and get there within the next twenty minutes. And we needed centers where you can put international staff without them having to worry about coming to Kano. We also needed easy access to Kano because we thought if our laboratories could not operate, we bring our

staff and students to laboratories in Bayero University (in Kano) because we were not prepared to allow anything to stop us from operating.”

Geography Education in Science Colleges Kano State

Numerous problems exist in teaching Geography in the Nigerian Secondary Schools, as in many parts of the world. However, such problems not only exist in teaching Geography but also prevail in the learning condition and perception of the course by students in Science Colleges. Without any doubt, as a field of study, Geography has teachers and students in the secondary schools in Nigeria and Kano state in particular. However, many of the students seem to be more interested in science subjects, such as chemistry, physics and biology, etc. than in Geography. Some students who are offered arts subjects do not give preference to Geography when selecting courses due to some problems. The problems are related to the use of instructional materials or in some cases lack of them, inadequate funds to purchase some text books and equipment, shortage of the time allocated, inadequate qualified teachers and the attitude/level of interest of students towards the subject. It is worthy of note that the potential problems in a particular school may not necessarily be the problems in another school. On a general basis, these problems, however, appeared to be common to all the secondary schools in Kano city. On many occasions they impede the successful teaching of Geography.

Additionally, it was also observed that Geography, unlike other subjects, does not command a wide appeal among students. The reason is that they perceived the subject as too wide and quite difficult. Thus, very few of them offer Geography in secondary schools. However, Geography teachers in Kano State are sometimes discouraged and the interest to increase their effort in the teaching the subject degenerates. It is discovered that some of the discouraging problems could be lack of adequate funds to carry out certain vital project/teaching methods, such as transport facilities, to convey students on educational field trips, which most managers of educational system fail to distinguish between field trip and excursion visit. Additionally, a stress has been made on the place of



Geography as a subject compared to other subjects on the school timetable. Unfortunately, it is found that the teaching of Geography is often combined with that of one or more subjects, such as history, natural science, language or social studies. This situation can of course be defined on educational grounds, in particular, on the ground that very few periods are set aside for the subject in each class. What must be avoided, however, is for the authorities of the schools to regard Geography as a completely unimportant subject, which can be taught by anyone with no special qualification. Whereas Geography is a complex discipline that nothing reasonably good can be achieved if it is not handled by trained teachers (Ajibo, 2005).

Moreover, Ajibo (2005) commented on the problem of finance in the maintenance of Geography where various teaching aids, ranging from slides with synchronizers, films and film strips with maps of various sizes, are stocked as well as a large space for practical work. Many problems are encountered in getting these things ready since most of the schools, particularly in Nigeria, are not provided with enough funds with which the school authority can purchase such instruments for Geography teaching or fieldtrips (Ajibo, 2005). In view of the above, it was stressed that successful learning can reasonably take place when good teachers, text books and teaching aids are provided for use in the class (Majason, 1969). Additionally, according to Musa (1998), it was observed that the poor teaching condition in Kano State is one of the problems facing the implementation of the new Geography curriculum. He stressed that teaching Geography in the state is not adequate due to the following problems; insufficient teaching labor, inadequate quality of teachers, lack of basic teaching and learning materials and the vast nature of the discipline. Based on the above observation and comment, lack of teaching qualification will end in poor teaching and low student performance in schools (Musa, 1998:15).

Moreover, Faniran (1996) stated that the peculiar problems facing Geography in the developing countries, especially Nigeria, include: lack of teaching qualification and lack of incentives and conviction on the part

of the available staff and others, Also, Abdul (2005) indicated that the major problems of Geography teaching qualification are not respecting specialization based on merits. Therefore, teaching qualification has affected teaching and learning Geography negatively (Abdullahi 2005; Faniran 1996: 1-2). Additionally, the failure of Geography education to prepare students for life and proper interaction with the environment has been attributed partly to the teaching methodologies by the teacher that the teaching has been theoretical in the Nigerian context (Okpala 1991: 80; Ololobou 2000:111). Although Geography education has been introduced in our Secondary many years ago, its achievement considering the present situation is far from being satisfactory if not discouraging. However, unlike other subjects, Geography lacks interest from many students. Some of the reasons being that the subject is said to be too wide and difficult and some of these difficulties lie in the domain of the practical aspect of the subject while the wideness manifests itself in the global coverage of all regions and their features. Thus, not all students offer Geography in secondary schools (Ajibo, 2005:1). Also, in most public secondary schools in Nigeria, only a few students are found reading the subject in the senior classes where students are made to choose subjects. Even among these few, some choose the subject in order to complete the number of subjects they are required to register for in their West African School Certificate Examinations. For example, in one of the schools this study covered, there was only one student reading Geography in grade eleven. These points to the fact that something is wrong with the teaching of the subject. In one of the studies conducted on the problems of Geography education in Nigeria by Okuntorifa (1981), it was noted that the new problem likely to face the Geography syllabus could be lack of suitable textbooks. Therefore, according to him, the most essential and useful thing in teaching Geography is ample and relevant textbooks, which create a problem in teaching the subject. He added that the useful objectives are those which express the kind of behavior to be developed in the student and the area in which this behavior is to be operated. However, the teacher must be able to interrelate between the overall aims of secondary school education and the specific objectives of the class lessons (Okuntorifa, 1981).



Additionally, Musa (1998) identified some problems related to teaching Geography in Kano State and Nigeria at large. He observed that in Kano State poor teaching is one of the problems facing the implementation of the new Geography curriculum. He stressed that teaching Geography in the state is not sufficient due to problems, including insufficient teaching labor, inadequate quality of teachers, lack of basic teaching and learning materials, class size and the vast nature of the discipline (Musa 1991:15). On the other hand, in terms of the quality of Geography teachers, it is very difficult to say that teachers are adequate in both quantity and quality. In this regard, we can say that they are inadequate in number to fill the gaps in the country despite the invasion by non-professional groups. Moreover, in another study, a survey was carried out in some fifty secondary grammar schools in different parts of Nigeria by MacBain (1967). The purpose of this survey was to find out and discuss the problems facing Geography teachers in the classes leading to the West African Examination Council O'Levels/School Certificate Examination and to ascertain whether there were any distinct patterns in the Geography courses offered by these selected schools. It was discovered that the problems encountered by the Geography teachers varied inversely in intensity according to the academic and professional background of the staff involved, as well as the level of dexterity (McBain 1967). However, among the complaint's students make against the subject is its abstractedness. Therefore, many of them thought that it is very difficult to understand most of what they are taught. For example, they said that it is hard to believe that things like conical hills, hanging valleys, etc. exist. The common perception among them is that most of what they learn in Geography, especially physical Geography, exists in an entirely different world (Ajibo, 2005:4).

Selected Facilities required in Teaching and Learning Geography

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• Model of mountains
• Model of plateaux
• Model of solar system
• Ranging pole
• Measuring tape
• Offset staff
• Station peg
• Optical square
• Günter's chain
• Arrows/pins
• Steel band
• Watkins's clinometers
• Field book
• Theodolite
• Prismatic compass
• Gbnew level
• Rain-gauge
• Thermometer
• Wind vane
• Anemometer
• Barometer
• Hygrometer
• Political map
• Physical map
• Topographic map
• Climate map
• Economic/resource map
• Road map
• Thematic map
• Rock samples
• Soil samples
• Globe
• Table and chair
• Reference books
• Model of the cross section of the earth interior
• Model of different lowlands
• Pictures

• Charts
• Graphs
• Atlas
• Drawing/tracing paper
• Thread
• Ruler
• Pairs of dividers
• Non programmable calculator
• Stevens screen
• Samples of industrial products
• Satellite images
• Computer
• Digitizer
• GPS
• Printer
• Scanner
• Video clips/documentary films
• Colours
• Pens
• Samples of limestone
• Internet
• Multimedia CD on satellites
• Multimedia CD on GIS
• GIS Map
• Candle and matches
• Torch light



Source: Geography Senior Secondary Education Curriculum (NERDC)

METHODOLOGY

Population and Sample

The population of this study comprises all the Science Colleges under the Kano State Science and Technical School Board. According to the Science and Technical Schools Board, there are ten (10) Science Colleges in Kano State with 34 Geography teachers and 7378 Students.

Table: 1 Distribution of Population of Geography teachers and students Kano Science Colleges.

S/N	STATE SCHOOLS	TEACHERS N	STUDENTS N
1.	Kano Science College, Dawakin Kudu	4	632
2.	Science College, Dawakin Tofa	2	710
3.	Maitama Sule Science College, Gaya	2	412
4.	Day Science College. Kano	4	588
5.	Governors Colleges.	6	1446
6.	Garko Science College. Kano	3	1078
7.	First Lady College.	3	919
8.	Girls Science and Technical College. Kano	4	622
9.	Girls Science and Technical College. Karaye	3	489
10	Girls Science and Technical College. Gwarzo	3	482
TOTAL		34	7378

Source: Kano State Science and Technical School Board (2016).

Data Collection and Analysis

Observation Check List (OCL): The Observation checklist was used to determine the availability of geography facilities in Science College with reference to the recommended geography facility required in the minimum standard, this is prepared by the researcher.

DATA PRESENTATION, ANALYSIS AND DISCUSSION

The schools were coded; A was used for Science College Dawakin-Kudu, B for Science College Dawakin-Tofa, C for Garko Girls Science College, D for Maitama Sule Science College Gaya, E for Girls Science and Technical College Karaye and F for First Lady College.

Table 2: Observation Checklist on Availability of Geography Facilities in Kano Science Colleges.

S/N	Item	Colleges					
		A	B	C	D	E	F
1.	Model of mountains	X	✓ 2	X	✓ 1	X	X
2.	Model of plateaux	X	✓ 1	X	✓ 1	X	X
3.	Model of solar system	X	✓ 1	✓ 2	✓ 10	X	X
4.	Ranging pole	✓ 25	✓ 1	✓ 1	✓ 1	X	X
5.	Measuring tape	✓ 4	✓ 1	X	X	X	X
6.	Offset staff	✓ 2	✓ 3	X	X	X	X
7.	Station peg	✓ 1	✓ 3	X	X	X	X
8.	Optical square	✓ 2	X	X	X	X	X
9.	Günter's chain	✓ 1	✓ 1	X	✓ 2	X	X
10.	Arrows/pins	✓ 21	✓ 5	✓ 3	✓ 12	X	X
11.	Steel band	✓ 1	X	X	X	X	X
12.	Watkins's clinometers	✓ 1	✓ 1	X	X	X	X
13.	Field book	✓ 1	✓ 1	X	X	X	X
14.	Theodolite	X	✓ 1	X	X	X	X
15.	Prismatic compass	✓ 1	✓ 1	✓ 1	X	X	X
16.	Gbnew level	X	X	X	X	X	X



17. Rain-gauge	2✓	2✓	1✓	1✓	X	X
18. Thermometer	2✓	3✓	X	1✓	X	X
19. Wind vane	2✓	1✓	X	1✓	X	X
20. Anemometer	2✓	1✓	X	X	X	X
21. Barometer	3✓	2✓	X	X	X	
22. Hygrometer	4✓	1✓	X	X	X	X
23. Political map	6✓	2✓	10✓	7✓	1✓	X
24. Physical map	2✓	2✓	1✓	1✓	X	X
25. Topographic map	2✓	1✓	2✓	3✓	X	2✓
26. Climate map	23✓	12✓	X	8✓	X	X
27. Economic/resource map	3✓	2✓	X	X	X	X
28. Road map	5✓	2✓	X	X	X	X
29. Thematic map	X	X	5✓	X	X	X
30. Rock samples	4✓	10✓	6✓	4✓	X	X
31. Soil samples	2✓	5✓	X	1✓	X	X
32. Globe	1✓	2✓	1✓	3✓	1✓	X
33. Table and chair	1✓	2✓	8✓	4✓	2✓	9✓
34. Reference books	5✓	X	8✓	3✓	11✓	X
35. Model of the cross section of the earth interior	X	X	X	X	X	X
36. Model of different lowlands	8✓	X	X	X	X	X
37. Pictures	25✓	18✓	X	12✓	22✓	X

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38. Charts	X	✓ 16	X	✓ 18	✓ 10	X
39. Graphs	X	✓ 8	X	X	✓ 20	X
40. Atlas	✓ 5	✓ 7	✓ 14	✓ 8	✓ 5	X
41. Drawing/tracing paper	X	X	X	X	X	X
42. Thread	✓ 1	✓ 2	X	✓ 1	X	X
43. Ruler	✓ 1	✓ 5	✓ 2	✓ 1	X	X
44. Pairs of dividers	✓ 2	✓ 2	X	✓ 1	X	X
45. Non programmable calculator	X	✓ 1	X	X	X	X
46. Stevens screen	✓ 1	✓ 1	✓ 1	X	X	X
47. Samples of industrial products	X	✓ 3	X	X	X	X
48. Satellite images	X	X	X	✓ 6	X	X
49. Computer	✓ 1	X	X	X	X	✓ 4
50. Digitizer	X	X	X	X	X	X
51. GPS	X	X	X	X	X	X
52. Printer	X	X	X	X	X	X
53. Scanner	X	X	X	X	X	X
54. Video clips/documentary films	✓ 3	X	X	X	✓ 1	X
55. Colours	X	X	X	X	X	X
56. Pens	✓ 8	✓ 3	X	✓ 2	✓ 10	X
57. Samples of limestone	✓ 1	✓ 3	X	X	X	X
58. Internet	X	X	✓ 4	✓ 2	X	X
59. Multimedia CD on satellites	X	X	X	X	X	X
60. Multimedia CD on GIS	X	X	X	X	X	X



61. GIS Map	X	X	X	X	X	X
62. Candle and matches	X	✓ 3	X	✓ 7	X	X
63. Torch light	X	✓ 1	X	✓ 4	X	X

Key X = not available
 ✓ = Available

Table 3

Summary of the Observation Check List				
A	B	D	E	F
40	43	31	10	3

DISCUSSION OF THE FINDINGS

The result of the study indicated that most geography facilities that are not available such as Gbnew level, Model of the cross section of the Earth interior, Drawing/Tracing paper, Digitizer, GPS, Printer, Scanner Colours, Multimedia CD on Satellites, Multimedia CD on GIS and GIS Map. This is shown in Table 2 which serves as observation check list showing the required Geography facilities specified by NERDC (2007) Senior Secondary Education Curriculum of Geography. The observation check list clearly indicated that most of these Geography facilities are not available in Science Colleges in Kano State and this is conforms with the assertion of Bethel and Hillary (2014) reported that some students could not acquire skills in the handling of certain equipment (e.g. in surveying) either because of non-availability of those equipment in their schools or their teachers lacked the expertise to teach them how to use those equipment even though those equipment were available.

CONCLUSION AND RECOMMENDATION

Based on the findings of this study, most of the Geography facilities are not available in Science Colleges in Kano State. It established that the non-availability of Geography facilities in Science Colleges had made it

difficult for geography teachers to effectively utilize or integrate Geography facilities in their teaching. Therefore, these facilities need to be urgently provided.

REFERENCES

- Abdul, M. (2005). *Barriers to Effective Teaching and Learning of Science Subject in Secondary Schools in Kano*. Federal College of Education Kano Unpublished PGDE Thesis.
- Ajibo, C.U. (2005). *The Problem Faced By Teachers in Teaching of Practical Geography in Some Selected Private Secondary Schools in Kano Metropolis*. Federal College of Education. Unpublished PGDE thesis, Kano.
- Bunkure, Y. I. (2012). *Effect of a Constructivist strategy on the Academic Achievement, Retention and attitude to physics among Secondary School Students of Different Ability Levels in Kano State Nigeria*. Unprinted researched dissertation, PhD, Ahmad Bello University, Zaria.
- Bethel and Hillary (2014). Assessment of the Policy Guidelines for the Teaching and Learning of Geography at the Senior High School Level in Ghana, *Journal of Geographical Education* 4 (1) 1-55. Retrieved. On 25, 2015 from www.rigeo.org.
- Brown and R.N. (1982) *Curriculum and Instruction: An introduction to methods of teaching*. Macmillan Nigeria.
- Faniran, A. Okunrotifa, P.O. (Eds) (1996). *A Handbook of Geography Teaching for Schools and Colleges*, Heinemann Educational Books, Ibadan.
- Ibrahim, M. S. (2013). Accommodating parental participation in managing school. *Journals of Education and Practice*. 4 (2): 29-32. Retrieved 3 April, 2015 from www.iiste.org/journals/index.php/JEP/issue/archive
- Inuwa, A. M. Yusof, N. M. & Saibon, J. (2014). Review of Parental and School Climate Factors Instrument for Secondary Schools in Nigeria. *Journals of Education and Practice*. 5 (21): 147-157.



- Retrieved on 27 March, 2015 from www.iiste.org/journals/index.php/JEP/issue/archive
- Jackson, P. W. (1986). *The practice of teaching*. New York: Teachers College Press.
- James, O. A. (2012). Effect of formative testing on students' achievement in junior secondary school Mathematics. *European Scientific Journal*, 8(8): 94-105. Retrieved on April 22, 2015 from www.enjournal.org/index.php/esj/search/results.
- John (2014). *Supportive dimensions of teacher behavior in relationship to pupil emotional cognitive processes*. *Psychologie in Erziehung und Unterricht*, 25, 69-74.
- Johnson, D., & Johnson, R. (2014, September 30). *Introduction to Cooperative Learning*. Retrieved from Cooperative Learning Center. <http://www.co-operation.org/home/introduction-to-cooperative-learning/>
- Joseph, O.O. (2013) *Determinants of Information and Communication Technology Integration in the Teaching of Sciences in Public Secondary Schools in Kisumu East District-Kenya*. Masters Dissertation for the award of Master of Education (Curriculum Studies), University of Nairobi Kenya.
- Jahun (2014), Predicting students' outcomes from their perceptions of classroom psychosocial environment. *Educational Research Journal*, 19, 498- 518.
- Kabir, H., & Khademi, M. (2013) some properties of semantic web in e-learning. *International Journal of innovation, management and technology* 1(2), 189-191. Retrieved from <http://www.ijimit.org/papers/389-2049.pdf>.
- Kamau, G.K. (2012). *Constraints in the use of ICT in Teaching-Learning Process in Secondary Schools in Nyandarua South District, Nyandarua Country, Kenya*. Masters Dissertation for the award of master of Education (Planning), Kenyatta University, Kenya.
- Kamalu (2013), *teaching Patterns: a Pattern Language for Improving the Quality of Instruction in Higher Education Settings*. Page 96.

- Karban, R. (2015). Plant Learning and Memory. In: *Plant Sensing and Communication*. Chicago and London: The University of Chicago Press, pp. 31-44.
- Karimganj (2015). A Retrospective Analysis of Geography Curriculum at Higher Secondary Level, West Bengal, India. *Journal of Interdisciplinary & Multidisciplinary Studies* 1(6): 99-105. Retrieved on 6 July, 2015 from <http://www.irjims.com>
- Kauchak, D. and Eggen, P.D. (1998). *Learning and teaching: research-based methods (3rd ed)*. Boston: Allyn and Bacon.
- Mabogunje, Akin L. (1970). "Migration Policy and Regional Development in Nigeria," *The Nigerian Journal of Economic and Social Studies*, 12, 1 (1970b), 243-262.
- MacBain GC (1967). *Injury by stabbing*. *Scott Med J*. 1967 Jul;12(7):251-255. [PubMed].
- Majason, J.A. (1969). *New Dimension in High Schools Geography (Ed.)*. Conference Proceeding at University of Ibadan. University Press, Ibadan.
- McKee, Erik, Vickie M. Williamson, and Laura E. Ruebush (2007). "Effects of Demonstration Laboratory on Student Learning". *Journal of Science Education and Technology*. 16.5 (2007) 395-400.
- Musa, Y.M. (1998). *Implementing New Geography Curriculum in Kano State: Problem and Prospects*, In J. Okpala, (Eds). *Teaching Geography for Living High Schools Geography*. Nigerian Geography Association.
- Muklerjee, A. (2002). *Educational Psychology*. (Revised Edition) Zaria: S. Asekome & Publishers
- Mohammed (2014). *Analysis of Factors Influencing the Performance of Student in Geography: A Case Study of Some Selected of Education*, Zaria Unpublished PGDE Thesis.
- Nuratu (2014). Some issues on Gender and the Teaching of Geography in Kano State Secondary Schools. *Journal of Humanities and Social Science*. 2 (2). 105-110. Retrieved 03 April 2015.



- Needham, B. L., Crosnoe, R. & Muller, C. (2012). *Academic Failure in Secondary School: The Related Role of Health Problems and Educational Context*. Retrieved on 30 May 2015 from www.ncbi.nlm.nih.gov/pmc/articlesPMC2846654/
- Nganji, J. T., Kwemain, R. & Taku, C (2010). Closing the digital gap in Cameroonian Secondary Schools with the CIAC Project. *International Journal of Education and Development Using ICT(IJEDICT)*, 6(2), 106-114.
- Ndiyo, N. A. (2013) A Dynamic analysis of education and economic growth in Nigeria. *The journal of Development Areas*, 4(2) page 1-16.
- National Policy on Education (2004). (Revised). Abuja, Nigeria: *Nigerian Educational Research and Development Council Federal Republic of Nigeria Gazette* (2004). NO. 66(91): 8 113- A124.
- Olaniyonu, S. O. A., Adekoya, S. O. A. and Gbenu, J.P. (2008). *Fundamentals of Educational of educational Planning (revised & enlarged)*. Lagos: Oshidex printing press.
- Olagunju O. (2011), Corruption in Nigeria: *Holistic approach. Advance in Arts, Social Science and education Research*. 2(1) page 76-84.
- Oluyori, R.N. (2010). *An Evaluation of the performance of Secondary School Students in Physical and Human Geography: A Case Study of Some Selected Secondary Schools in Abuja*. Proceedings of the National Conference on: Contemporary Issues in Infrastructural Development, at the 51th Annual Conference of the Association of Nigerian Geographers (ANG), Kogi. March, 2010. 163-172.
- Olanipekun AO (1988). *Economic and Social Implications of the New Geography Curriculum*: in F. C. Okafor, A. R. O. Jibunoh, M. A. A Handbook for Practicing Teachers. Warri: Nigerian Geography Teachers Association (SWZ): 69-92.
- Osho EO, Osho I (2000). The national policy on Education and functionality: *The case of Junior Secondary School (JSS)*. Known Rev. 2(2): 79-84.

- Ondigi, S. R. (2012). Role of Geography and pedagogical approaches used in the training of pre-service teachers in Kenyan Universities: A Case of Kenyatta University, Kenya. *International Journal of Academic Research in Progressive Education and Development*. 1 (4): 256-281. Retrieved May 30 2015 from www.hrmars.com/admin/pics/1330.pdf
- Okpala, J. (1990). Geography in general education in Nigeria. *Geo journal*, 20(1) 31-43.
- Okpala, (1988). Research in Geographical Education in Nigeria from 1981 to 1986, in Gerber, R. and Lidstone, J. (Eds) Developing Skills in geographical education, Brisbane: *international Geographical union commission on geographical education, jacaranda Press*.
- Okebukola P. (2006). *Challenges of teacher education in 21st Century Nigeria*. Lead paper presented at the 1st National Conference of Faculty of Education, University of Abuja, Nigeria.
- Ololobou, T.P. (2000). Teaching High School Geography in Nigeria: A Plea for More Functional Approach, in Bello, A.L. et Al. (eds.) Geography and Resources Management in Democratic Nigeria. 43rd Annual Conference of the Nigerian Geography Association Held at ABU Zaria.
- Rilwani, Akahomen, and Gbakeji (2014) Secondary School Students' attrition in Geography in Esan West Local Government Area, Edo State Nigeria. *Sky Journal of Educational Research* 2(4), pp. 028-036 03 April, 2014. Retrieved from <http://skyjournals.org/SJER>
- Salman, M. F., Mohammed, A. S., Ogunlade, A.A. & Ayinla, J. O. (2012). Causes of mass failure in senior secondary school certificate Mathematics examinations as viewed by secondary teachers and students in Ondo, Nigeria. *Journals of Education and Practice*. 3 (8): 79-88. Retrieved on 3 April, 2015 from www.iiste.org/journals/index.php/JEP/issue/archive.
- UNESCO (2008). *Digital Services for Education in Africa* (PDF). UNESCO. p. 56.