Availability and Utilization of Instructional Materials in the Implementation of Geography Curriculum in Ibadan

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Abstract
This study assessed availability and utilization of resources in the implementation of the secondary school geography curriculum in Ibadan metropolis. Three research questions were raised for the study. The study adopted the survey research design using 200 students and 40 teachers as samples. Data was analyzed using descriptive tools. Findings show that 55.7% geography teachers in secondary schools in Ibadan are not qualified academically and professionally. Furthermore, all secondary schools do not have geography room and geographical garden and easily accessible and creatable materials like specimen of rocks, specimen of soil, candles, torchlight, strings and rain gauge are never used. It was recommended that the number, variety and quality of teaching resources of the national curriculum for secondary school geography should be provided for schools. Teachers should use their ingenuity and frequently use the available instructional materials within the local community for teaching and learning geography.

Keywords: Instructional resources, Curriculum implementation, Resources utilization, Teacher quality

Introduction

There is a positive relationship between the goals of secondary education and the objectives of teaching geography in Nigeria because what the subject can contribute to realization of these goals informed largely its conception. However, regardless of loftiness of the objectives of any subject, its effective implementation is fundamental to outcomes. The assertion of Ali and Ajibola (2015) that no level of education can achieve its objectives if the planned programme for such is not well implemented, underscore this view aptly. The availability and use of instructional materials is critical for effective implementation of the geography curriculum bearing in mind the practical and utility oriented outlook of the curriculum which demands students' interaction with resources – human, physical and cultural for a meaningful, useful, powerful and integrated outcome. It is pertinent to remark that it is one thing to design curriculum, it is another thing to implement it effectively as intended. As Onyeachu (2008) observed that no matter how well a curriculum of any subject is planned, designed and documented, implementation is important.

Curriculum implementation is a process of interaction among the planner of the curriculum, the implementer of the curriculum, the learner and the learning environment. The more knitted each element is to the other in this interaction, the more likely the desired outcome will manifest. The teacher – who is the major implementer of the curriculum plays a very important role in the process by bringing the plan to live. What the teacher does with it, in the classroom determines whether the set goals would be achieved or not. However, how well a teacher implements a curriculum is determined by some factors which include but not limited to the teacher's knowledge, professional training, competence, initiative, interest, and motivation. Though, such factors as students' interests, readiness and physical environment (eg availability and adequacy of learning materials and equipment) may constrain proper implementation. A knowledgeable and competent teacher should always be able to make the best out of any situation.

Every society designs its curriculum and when this is planned, documented and formalized, it uses the vehicle of formal education. Offorma (2005) succinctly put it that curriculum is a vehicle through which education is attained. The teaching of geography in Nigeria started in the second half of the 19th century. The essence then was to train Nigerians to become interpreters and court clerks for effective administration of the colonial government. It was taught at both primary and secondary levels and dominated by British influence both in personnel and philosophy. Amosun (2016) described the teaching and learning of geography during this period as nothing but 'a shamble'. Nigerian geographers of the era through the Nigerian Geographical Association (NGA) now known as the Association of Nigerian Geographers (ANG) criticized the fundamental objectives, content, and methods of school geography as inadequate for the needs of Nigerian children. The West African Examinations Council played the role of the 'lord' by dictating their syllabus as the only guideline for teaching.

With the formulation of the national policy in 1977, each discipline planned its content and learning experiences which will lead to acquisition of knowledge, attitudes and skills required for effective living in Nigeria. In school geography, a significant change was the emphasis of study on the local, national and regional geography. In addition, there was a national curriculum revision and for the first time, a national curriculum in geography was structured with the objectives, content, methods, and evaluation clearly specified as a guide to teachers. New concepts like environmental resources and hazards were also introduced into school geography and the theoretical framework of the curriculum emphasized utility-oriented learning and problem-solving with emphasis on fieldwork.

In order to achieve these aims, the use of teaching and learning resources particularly local resources that are easily available as indicated in the 2007 curriculum guide, which is currently in operation. A geography room endowed with charts, periodicals, almanacs, maps, atlases, newspapers, other equipment and multi-media resources in sufficient quantity for the students is equally important and compulsory for a meaningful learning atmosphere. The following resources are needed and should be utilized in teaching geography;

i. World Globe-: This is needed to teach topics such as earth's shape, latitude and longitude, regions of the world, water distribution on the earth surface, rotation and revolution etc.
ii. Maps-: These should be in different types such as topographical maps, atlas maps, sketch maps, cadastral maps, aerial photographs etc. These maps are needed to teach map reading and

interpretation and aspects of physical geography like vegetation belts, climatic zones etc.

iii. Models-: Models are three dimensional. They are deployed when real objects cannot be presented to the students.

iv. Charts, Diagrams, and Pictures-: These are representatives of realia in a two- dimensional media.

v. Real Objects-: Real objects can be deployed in the teaching and learning of geography and teachers are expected and encouraged to deploy these resources more in their teaching. This perhaps is the reason for field trip strategy in the curriculum guide. Examples include; study of the action a a running water, mineral resources exploration sites, rock samples, influence of highway on development etc.

vi. Meteorological Instruments-: These are the weather instruments used by the geographers to collect and measure certain elements. Rain-gauge for rainfall; barometer for pressure; wind vane for wind direction; anemometer for wind speed; thermometer for temperature; hygrometer for humidity etc.

vii. Power media-: These materials depend on power to generate for it to function and be usable. Example include overhead projector, slide projector, computer power point, video player etc.

viii. Printed materials such as textbooks, magazines, paper cuttings, journals etc are also stated in the curriculum guide as instructional materials that should be deployed in the teaching and learning of geography in secondary schools.

When all of these resources are available, adequate, accessible, functional and utilized, it is still possible to witness a major setback in effective curriculum implementation due to the problem of unqualified teachers especially specialist teacher. Ali & Ajibola (2015) submit that for any programme of the curriculum to be properly implemented, the implementer must be adequately qualified. According to them, in most cases in Nigeria, teachers are compelled to teach subjects that are not their areas of specialization. It is pertinent therefore to assess the quality of geography teachers in our secondary schools. Ajibola (2008) points out that most of the teachers in Nigerian secondary school are not qualified to teach the subject introduced in the curriculum.

In addition to the teacher factor, in effective curriculum implementation, the instructional facilities also play a very crucial role. Instructional facilities in this sense refer to the rudimentary structures and facilities which are very necessary for effective teaching and learning in the school. These facilities enable the teacher to deliver and also encourage the students to learn. Osifila (2004); Subedi (2003) found a significant relationship between adequacy of physical plants; and teachers' effectiveness and students' academic performance. Ehiametalor (2011) in an attempt to emphasize the role of facilities in the work place posits that facilities are those factors which enable production workers to achieve the goals of an organization. Similarly, Olokor (2006) asserts that the use of instructional facilities enhance learning experiences and lead to interaction within the learning environment. In the same vein, Overbaugh (2010) concludes that physical environment or facilities affect teachers in their performance in the classroom and to him, the most important environmental features are the classrooms, furniture and class equipment. Conclusively on the importance of instructional facilities, Ivowi (2004) notes that to ensure curriculum is effectively implemented, infrastructural facilities, equipment, tools, and materials must be provided sufficiently.

Besides facilities, instructional materials is another factor that can influence effective curriculum implementation. Instructional materials make teaching and learning easier, more meaningful and understandable. Dike (1987) describes instructional materials as alternative channels of communication which a teacher can use to compress information and make them more vivid to his learners. In the same vein, Babalola (2004) avers that the promotion and encouragement of effective teaching and learning experiences is the reason why instructional materials are designed for use in the process of teaching and learning. Ajayi (2009); Anyakogu (2012) submit in their studies that there exist a relationship between availability of instructional materials and curriculum implementation.

Statement of the Problem

Geography as a school subject is no longer enjoying the high patronage from students as it were perhaps because the subject is not fascinating to these students anymore. It is imperative to arrest this worrisome situation in the wake of high competition among subjects brought about as a result of change in educational policy in 2013 which has now declassified geography as an optional subject to be selected from twelve other school subjects as against being 'core-elective' to be selected between Literature-in-English and History before 2013. Research has shown that Nigeria secondary school curriculum is appropriate in terms of goals and content and laudable but seems to suffer from poor implementation. Past studies assessed the availability of instructional materials for geography teaching and learning in Ibadan without consideration for utilization of readily available materials and availability of quality teachers. This study therefore assessed teachers' quality, availability and utilization of instructional resources in the implementation of the national secondary school geography curriculum to ascertain the extent to which the intended curriculum is the same with the implemented curriculum in the aspect of resources deployed.

Research Questions

1. Are the instructional resources (non-human) for implementation of geography curriculum for secondary school available?
2. Are the instructional resources (non-human) for implementation of geography curriculum for secondary school utilized?

Methodology

This study adopted the descriptive survey design. This method is deemed appropriate as it involved the collection of extensive and cross-sectional data for the purpose of describing and interpreting an existing

situation under study. The simple random sampling technique was used in selecting three out of the five Local Government Areas(LGAs) that constitute Ibadan metropolis. The simple random technique was used in selecting 10 secondary schools in each of the selected LGAs. Students in SS2 were purposively selected for the study because they will have been exposed sufficiently to the curriculum and without the pressure of preparation for external examinations. Geography teachers (at least one teacher per school) were purposively selected in each school because they are the implementers of the geography curriculum in and outside of the classroom. Two hundred students (200) in Ibadan metropolis constituted the respondents on the one hand and 40 geography teachers within the same territory constituted the other respondents. The teachers' and students' questionnaires were divided into sections. Section A was concerned with the demographic data of the respondents while other sections focused on the information required for the study. The pieces of information in the questionnaires were drawn from the National Curriculum for Secondary School Geography. A modified Likert-type four-point rating scales with the numerical values of 4, 3, 2, and 1 or 1, 2, 3, and 4 were for both teachers' and students' questionnaire depending on each item framing. The reliability co- efficient for the questionnaires were 0.82 and 0.84 respectively.

Data for the study were collected during regular school hours in the third term of 2018/2019 academic session. Data were collected directly to avoid teachers' influence, though the geography teacher(s) in schools visited, assisted in coordinating and preparing the students for the administration of the questionnaire.

Results

Research Question: Are the instructional resources (non-human) for implementation of geography curriculum for secondary school available and utilised?

Table 1: The Teachers' and Students' Percentage and Mean Scores Rating on Availability and Utilization of Instructional Materials used in the Teaching and Learning of Geography

S/N	FACILITIES/EQUIPMENT/MATERIALS	Teachers	Mean	Students	Mean
1	Geography room	NA (72.2%)	1.72	NA (82.9%)	1.44
2	Geographical garden	NA (44.4%)	2.11	NA (58.5%)	1.87
3	Weather Station/Stevenson's Screen	NA (55.6%)	2.00	NA (64.7%)	1.74
4	Atlas	AFU (55.6%)	3.44	NA (33.3%)	2.61
5	The Globe	AFU (61.1%)	3.50	ANFU (36.6%)	2.72
6	Photographs	ANFU (44.4%)	2.72	NA (44.4%)	2.28
7	Films	NA (66.7%)	1.77	NA (71.9%)	1.59
8	Journals and Pamphlets	NA (52.9%)	2.11	NA (65.7%)	1.77
9	Model	NA (52.9%)	2.05	NA (64.5%)	1.78
10	Torchlight	NA (50.0%)	2.22	NA (49.1%)	2.26
11	Candles	NA (44.4%)	2.05	NA (58.0%)	1.92
12	Specimen of Rocks	AFU (47.1%)	3.00	NA (53.6%)	2.07
13	Wet and Dry Thermometer	NA (44.4%)	2.44	NA (40.1%)	2.54
14	Thermometer	AFU (38.9%)	2.72	ANFU (31.8%)	2.64
15	Rain Gauge	NA (50.0%)	2.27	NA (40.2%)	2.39
16	Diagrams and Sketches	AFU (55.6%)	3.22	AFU (45.8%)	2.88
17	Wall Maps	AFU (66.7%)	3.22	AFU (41.2%)	2.70
18	Wall Graphs	NA (47.1%)	2.35	NA (39.3%)	2.68
19	Topographical Sheets/Maps	AFU (77.8%)	3.66	AFU (50.9%)	3.03
20	Rulers	AFU (61.1%)	3.50	AFU (69.2%)	3.49
21	Measuring Tape	AFU (35.3%)	2.70	AFU (50.6%)	3.11
22	Dividers	AFU (66.7%)	3.38	AFU (54.2%)	3.11
23	Strings	AFU (55.6%)	2.94	AFU (37.9%)	2.86
24	Compass	AFU (66.7%)	3.38	AFU (45.2%)	2.87
25	Blank Maps	NA (52.9%)	2.23	NA (54.85)	2.01
26	Slides	NA (70.6%)	1.70	NA (59.9%)	1.79
27	Specimen of soils	AFU (52.9%)	3.11	NA (43.1%)	2.29
28	Limestone specimen	NA (50.0%)	2.16	NA (52.1%)	2.00
29	Graph Books	AFU (61.1%)	3.27	AFU (41.4%)	2.81
30	Sand Trays	NA (58.8%)	1.88	NA (61.7%)	1.78
31	Chain	NA (70.6%)	1.76	NA (65.1%)	1.74
32	Arrows	NA (76.5%)	1.58	NA (85.5%)	1.28
33	Tapes	NA (52.9%)	2.17	NA (45.5%)	2.27
34	Ranging poles	NA (70.6%)	1.76	NA (64.1%)	1.70
35	Prismatic Compass	NA (82.4%)	1.41	NA (69.1%)	1.66
36	Pictures/ Charts	AFU (55.6%)	3.00	AFU (34.1%)	2.69
37	Wind Vane	NA (41.2%)	2.52	NA (38.7%)	2.29
38	Anemometer/Wind Speed	NA (50.0%)	2.27	NA (51.2%)	2.14
39	Barometer	NA (64.7%)	1.88	NA (52.7%)	2.11
40	Recommended Textbooks	AFU (72.2%)	3.50	AFU (65.7%)	3.30

Composite Mean: 2.41

Key: Available and Frequently Used (AFU) = 4; Available but Not Frequently Used (ANFU) = 3; Available but Not Used At All (ANUA) = 2; Not Available (NA) = 1.

The data in Table 1 are presented for answering the first research question. From the table, majority of both teachers and students agreed that geography room, geographical garden, Stevenson's screen, films, journals, model, torchlight, candles, wet and dry thermometer, rain gauge, wall graphs, blank maps, slides, limestone specimen, sand trays, chain, arrows, tapes, ranging poles, prismatic compass, wind vane, wind speed, and barometer are not available in secondary schools. Both teachers and students also concurred that diagrams and sketches, wall maps, topographical maps, rulers, measuring tapes, dividers, strings, compass, graph books, charts and recommended textbooks are available and frequently used. Teachers indicated that Atlas and the globe, specimen of rocks, thermometer and specimen of soils are available and frequently used but the students disagreed and indicated that Atlas, specimen of rocks and specimen of soils are not available, the globe and thermometer are available but not frequently used. The composite mean of 2.41 shows that the prescribed instructional materials needed for the teaching and learning of geography in secondary schools were available but not used at all. It is very explicable from this finding that almost all secondary schools do not have geography room and geographical garden which are very essential to the teaching and learning of geography. The unavailability of these major facilities (geography room and geographical garden) account for the end result of instructional materials being available but not used at all. The instructional materials for teaching and learning geography are supposed to be in the geography room just like the chemicals and other apparatuses in Chemistry, Physics and Biology are kept in laboratories. Also the study showed that instructional materials such as candles, torchlight, soil specimens, rocks specimen, films, rain gauge, wind vane, anemometer and others which are very available and can be improvised easily were indicated as never available and utilized by both the teachers and students. It can therefore be argued that geography teachers are not bringing to bear their ingenuity in the implementation of the geography curriculum.

Conclusion

The study revealed that easily creatable resources are not available nor utilised in secondary schools to implement the geography curriculum. Therefore, availability and utilization of instructional materials determine the level of implementation of secondary school geography curriculum in Ibadan.

Recommendations

Based on the findings of the study and their educational implications, the following recommendations are made in order to improve the secondary school geography curriculum and its implementation:

1. The quantity, variety and quality of teaching equipment and materials for teaching the contents of the national curriculum for secondary school geography should be provided for schools and schools should also make these available to teachers.
2. The geography teachers should frequently use the available instructional materials for teaching and learning geography.
3. The quality of geography teachers available in secondary schools for the implementation of the national curriculum of geography should be improved. The drive by the Teachers Registration Council of Nigeria to get teachers certified professionally should not be limited to pedagogical knowledge but also subject-matter knowledge.

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