



Availability and Use of Geographical Resources for Teaching and Learning of Geography in Secondary Schools in Kaduna State

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ABSTRACT

This research aims to assess the availability and utilization of geographic materials for teaching and learning geography in Senior Secondary Schools in Kaduna state. The study comprised of 88 randomly selected Geography teachers from 55 purposively selected Public Schools across 11 systematically selected Local Government Areas in the state. The SPSS package was used to determine the percentages, means, and standard deviation of the data generated. The results revealed that the major instructional resource available for the teaching of geography in Secondary Schools in the state is textbooks (mean score of 3.43). The study also revealed that the majority (57%) of the respondents observed a significant improvement in students' learning outcomes when using geographical resources in their lessons. It was concluded that Geographic concepts should be taught using different instructional materials. These instructional materials are, however, either completely not available or grossly inadequate in most of the Public Secondary Schools in Kaduna State. It was also recommended that the State Government should make instructional resources such as maps, atlases, and textbooks available and accessible for use in the teaching and learning of geography lessons to boost students' motivation for learning as well as increase their practical skills acquisition.

ARTICLE INFO

Article History

Received: August, 2023

Received in revised form: August, 2023

Accepted: January, 2024

Published online: March, 2024

KEYWORDS

Geographic Resources, Availability, Utilization, Teaching, Learning and School.

INTRODUCTION

Educational attainment in any nation depends upon the quality of teaching. Teaching and learning are activities employed by an educator to make learning possible, whilst learning is an active process that happens within the student when there is integration of new knowledge with existing knowledge (Farikayi and Goosen, 2022). Teaching is also explained as an art that helps to transmit information, ideas, values, and concepts to students to bring about positive changes in the behavioral patterns of learners (Sarkar, 2016).

For learning to effectively take place, it must be backed by a variety of learning materials. In this study, these learning materials

or teaching aids are referred to as geographic instructional resources. Instructional Materials or Teaching and Learning Materials are resources that a teacher may use in teaching and learning situations to help achieve desired learning objectives and to facilitate the teaching and learning process. Broadly, the term refers to a spectrum of classroom educational materials teachers use to achieve specific learning objectives. (OpenLearn, 2022).

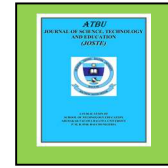
According to Sharma and Bozkurt (2024), Instructional materials are the tools and resources educators use to facilitate and enhance the teaching process. Instructional materials support the delivery of educational content, helping to explain concepts and guide

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the learning process. They are aligned with specific learning objectives, and teaching methodologies and focus on the “how” of teaching. Examples of instructional materials include lesson plans, teaching guides, instructional videos, PowerPoint presentations, and other resources used in classrooms or virtual learning environments. Others include textbooks, video/audio and visual aids, printed and graphic materials, Maps, sketch maps, pictures, photographs, film stripes, tape recording, radio, films, diagrams, thermometer, barometers, wind vane, rain gauges, geography laboratory equipment, projectors, and computers (Ashaver and Mwuese, 2013, Dhakal, 2017; Datti & Garba, 2015; Sarkar, 2016; Save the Children 2017). They are designed to make the learning process more effective and efficient for both educators and students. The best instructional materials are aligned with all other elements of the course, including the learning objectives, assessments, and activities. Ideally, the teaching and learning materials will be tailored to the content in which they are being used, to the learners in whose class they are being used, and to the teacher.

These instructional resources are important in students' learning as they attend to various learners' needs. They provide learners with skills of critical thinking, problem-solving creativity, memorization, and problem-solving, as well as stimulate learning in a fun and inclusive manner (Mugisha, 2020). Instructional resources are thought (Dhakal, 2017) to make the teaching process easier, especially teaching geography. Teachers should use diverse types of instructional materials for the teaching of geography to be effective. The disciplinary change in basic assumptions in Geography has made using instructional materials in teaching and learning the subject necessary. According to Mzingo and Onyango (2021), it helps learners to fully participate in the learning process as well as interact with their teachers and fellow students which is very important for the improvement of teaching and learning geography.

Similarly, Dhakal, (2020), emphasized the importance of instructional resources and stressed that learning cannot be concrete or

meaningful if instructional materials are absent and that teaching and learning can only be effective if teachers teach students to visualize what they are taught or manipulate what they are taught in practical terms. The absence of instructional materials in our schools makes it difficult for teachers to teach especially science subjects effectively. It was further revealed that the use of instructional materials fosters early specialization as the students begin to find an aspect of the subject taught with instructional materials interesting. For curriculum to be well implemented effectively teachers must use technological tools to make lessons concrete which will increase student's creativity and innovative skills (Micheal, Yakubu, Made and Ali, 2023).

Challenges faced by teachers and learners in effective teaching include unavailable instructional materials for teachers (Aun, Adaga, Ajala, Odunayo, and Adaaku, 2020). Sarkar (2016) agrees, emphasizing the instructional resources used, the method used in teaching, the quality of teachers and students, and the school management. Dhakal, (2017) identified printed materials (reference books, magazines, journals, newspapers, teachers' guides, dictionaries, etc.) as being available and frequently used in Secondary schools in Nepal.

Many factors can contribute to learners' better performance but key among them include adequate instructional materials and physical facilities, well-trained and adequate teachers, and proper utilization of the language of instruction. Literature abounds of the unsatisfactory, poor, and discouraging performance of Nigerian secondary school students in Geography (Akintade (2012), Aderogba (2012); Amosun (2016); Filgona, Sababa, and Algona (2016); Folade, Usman, Ilobeneke, Mohammed, Godwin, and Jimoh (2016); Etim, Udosen, and Ema (2016).

It is generally acknowledged that students' performance in ordinary-level geography examinations conducted by the West African Examination Council (WAEC) was poor over the year 2006-2018 (WAEC results statistics, 2018). This trend is not only disturbing



but also very discouraging especially based on the persistent nature of the problem as reflected in WAEC Chief Examiners' reports from 2006 – 2018, (Eze, 2020). Studies by Anlimachie (2019), blame weak performance in Geography at WASSCE on the low level of practical and fieldwork, while linking the same to a shortage of ideal teachers, poorly stocked Geography resources rooms, instructional materials, and other school resources. The impact of these on students' learning, is the creation of a missing link between classroom learning experiences and real-world situations. Thus, inadequate preparation can be explained partly by inadequate ideal teacher supply, and shortage of an array of Geography teaching and learning resources. Harping on these same points, Rilwani, Akahomen, and Gbakeji (2014) identify inadequate teachers and a lack of requisite teaching facilities/aids as major factors that translate to poor teaching of Geography and students' increasing unwillingness to offer the subject.

This is true of Kaduna State where a lot of teachers were forcefully retired or dismissed without compensation with no corresponding recruitment. Also, the Secondary School Curriculum has made geography an optional subject for both Science and Arts students. According to the Chief Examiners' reports, students encounter problems in the areas of map reading, map interpretation, survey, and remote sensing, among others, which have been recurrent challenges for students. This persistent low performance of students in some aspects of Geography leaves one in doubt about the effectiveness and teacher's level of compliance with the implementation of the senior secondary school Geography curriculum. The low performance has been attributed to poor methods of instruction (Sharma, 2013), wide coverage of the subject (Ofodu, 2010), insufficient instructional materials (Abidoye and Oguniyi, 2012), and inadequate qualified teachers (Balogun, 2006). In essence, to achieve the objectives of teaching Geography in senior secondary schools, a variety of methods and instructional materials should be employed. In

light of the above, this study sets out to assess the extent to which instructional materials are available and being used in Secondary Schools in Kaduna State.

Aim of the Research

This research aims to assess the availability of resources for teaching geography in secondary schools within Kaduna State.

Research Objective

To determine the types of resources available for teaching geography in secondary schools in Kaduna State.

RESEARCH METHODOLOGY

A reconnaissance survey of the study area was carried out by the researchers to have an adequate knowledge of the study area. During the survey, the researchers held discussions with major stakeholders in the Secondary School sub-sector such as Quality Assurance Officers, Supervisors, and principals of selected schools. It was at this stage that the researchers were able to obtain the list of all Government secondary schools in the state.

The main research instrument here is the questionnaire which was administered in different schools across the study area. The questions were designed for the geography teachers. The questionnaire had seven sections. Section 1 deals with the demography of the respondents, section 2, seeks information on the availability of geographic resources; Section 3; the integration of geographic resources into lessons, section 4; Teacher training and professional development; Section 5, student engagement and learning outcomes; section 6, challenges and recommendations; section 7, additional comments.

A list of Kaduna state government secondary schools was obtained at the headquarters of the Quality Assurance Unit of the Ministry of Education. Other relevant information was sourced from existing official statistics from both national and international publications, including books, journals, conference papers, theses, and the Internet.

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The sample size consists of 88 geography teachers randomly selected from 55 schools across 11 Local Government Areas in Kaduna State. There are 23 Local Government Areas in the state which were arranged in alphabetical order and assigned numbers from 1-23. Only the Local Government Areas on even numbers were selected, hence the 11 Local Government Areas. Five schools were purposively selected from each Local Government Area, totaling 55 schools. In each of the 55 schools, 2 Geography teachers were to be randomly selected, however, some of the selected schools didn't have any geography

teacher, while others had only 1 teacher which gives the total number of 88 respondents.

The data collected was analyzed using percentages, mean, and standard deviation in the SPSS environment to determine the extent of availability, adequacy, and utilization of the geographical educational materials from the questionnaire based on the Likert scale.

RESULTS AND DISCUSSION

This section deals with the results obtained from the data analyzed. It also discusses the outcome of the analysis.

Table 1: Educational qualification of respondents

Qualification	Frequency	Percent
NCE	16	18
Diploma	1	1
Degree	58	66
Masters	13	15
Total	88	100

Fieldwork, 2023

Table 1 reveals that most of the respondents (66%) have obtained their first degree in geography while those with the minimum teaching requirement (NCE) are 18%. Interestingly, there is a high percentage of teachers with master's degrees in geography (15%) teaching in Secondary Schools in Kaduna

State. It is obvious from the table that the geography teachers in the state have the requisite qualifications to teach the subject. Qualification is important because it impacts either positively or negatively on the use of geographic resources in teaching the subject.

Table 2: Years of teaching experience

Years	Frequency	Percent
1-5	17	19
6-10	22	25
11-15	24	27
16-20	15	17
21-25	2	2
26-30	5	6
31-35	3	3
Total	88	100

Fieldwork, 2023

From the above table, most of the respondents (19%, 25%, and 27%) have been teaching in Kaduna State-owned Secondary

Schools for onwards of 5, 10, and 15 years respectively. It is a clear indication that the respondents are highly experienced teachers

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with over 10 years of teaching geography. Working experience is pivotal in the use of educational resources. This has been corroborated by Kini and Podolski (2016) who found the existence of a positive association between teachers' experience and student achievement, emphasizing that the more experience teachers gain, the better their students become in other measures of success.

Table 3 presents the result of the Likert Scale analysis of the availability of resources

used in teaching geography in Public Secondary Schools in Kaduna State. The scale ranges from 1-5 where: 1=Not Available, 2=Somewhat Available, 3= Available, 4= Very Available, 5= Highly Available. The mean value was used to determine resource availability for each item. A mean of 3.00 and above is accepted as being available while the mean value less than 3.00 is deemed inadequately available (2.0- 3.0) and not available (1.0-2.0).

Table 3: Available Geographic Resources in Secondary Schools

Resources	N	Minimum	Maximum	Mean	Std. Deviation
Maps	88	1.00	5.00	2.45	1.42
Globes	88	1.00	5.00	2.76	1.55
Computers	88	1.00	5.00	2.76	1.74
Internet	88	1.00	5.00	2.22	1.63
GIS	88	1.00	5.00	1.57	1.09
Textbooks	88	1.00	5.00	3.43	1.50
Fieldtrip	88	1.00	5.00	2.04	1.36
Abney Level	88	1.00	4.00	1.44	.75
Arrow	88	1.00	5.00	1.60	1.00
Compass	88	1.00	5.00	1.77	1.20
Projector	88	1.00	5.00	1.89	1.33
Tables	88	1.00	5.00	1.88	1.29
Rocks	88	1.00	5.00	2.45	1.58
Theodolite	88	1.00	5.00	1.81	1.30
Thread	88	1.00	5.00	2.73	1.62
Ranging Poles	88	1.00	5.00	1.70	1.23
Slides	88	1.00	5.00	1.45	.95
Flash Cards	88	1.00	5.00	1.77	1.27
Charts	88	1.00	5.00	2.79	1.59
Chain	88	1.00	5.00	1.95	1.49
Rulers	88	1.00	5.00	2.56	1.65
Microphone	88	1.00	5.00	1.75	1.29
TV	88	1.00	5.00	1.61	1.21
Weather Station	88	1.00	5.00	1.78	1.37
Garden	88	1.00	5.00	1.79	1.35

Field Work: 2023.

From the table above, the only resource with a mean value above 3.00 is textbooks (3.43), implying that the major instructional resource available for the teaching of geography in Secondary Schools in the state is textbooks. Other resources identified and

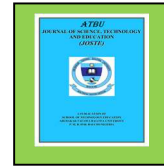
classified as inadequate include maps, globes, charts, rocks, thread, and rulers. Most other resources required for teaching geography as a subject are not available for use in Secondary Schools.

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CONCLUSION

Geography is a discipline that examines the relationships between people and the earth, what people are doing because of these relationships, and what they can do. Geographic concepts should be taught using different instructional materials. These instructional materials are, however, either completely not available or grossly inadequate in most of the Public Secondary Schools in Kaduna State.

RECOMMENDATIONS

1. The State Government should make instructional resources such as maps, atlases, and textbooks available and accessible for use in the teaching and learning of geography lessons to boost students' motivation for learning as well as increase their practical skills acquisition.
2. The available resources should be used maximally and effectively by learners. The teachers must expose all the available learning resources without mostly using textbooks.

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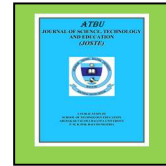
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