



Availability and Utilization of Instructional Materials for Effective Teaching and Learning of Geography in Secondary Schools in Yola Metropolis of Adamawa State.

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ABSTRACT

This research aims to examine the availability and utilization of instructional Materials for effecting teaching and learning of Geography in Secondary Schools in Yola Metropolis of Adamawa State, Nigeria. Six objectives and six research questions are raised to guide the conduct of the study. Literatures related to the topic under study were reviewed thematically. The study was conducted in Yola-Metropolis of Adamawa State which comprises of Yola North and Yola South LGAs. The study adopted and make use of survey research design. The population of the study comprises of all Geography teachers and all students offering Geography in secondary schools in Yola Metropolis of Adamawa State. Due to the large number of secondary school, Geography Teachers and Students offering Geography in Yola-Metropolis of Adamawa State, the researchers selected a sample of 10 secondary schools, 250 students offering Geography and 20 Geography Teachers as respondents for the study. The researchers adopted the stratified simple random sampling technique to select the 270 respondents for the study. A 70 item questionnaire designed by the researchers and tagged “availability, adequacy and’ utilization of instructional materials for effective teaching of Geography Opinion Questionnaire”, was used as the instrument for data collection. The instrument e used for the study was given to two experts in Geography Education at Federal College of Education, Yola to determine the content and construct validity. The questionnaire was trial-tested in a pilot study Numan Local Government Area, which is not part of the sampled area of the study but possessed similar characteristics with the study area. The reliability of the instrument was determined through Cronbach Alpha reliability procedure and an Alpha coefficient of 0.77 was obtained. Simple percentage was used to analysed respondents bio-data and questionnaire return rate while, the mean score approach was employed for data analysis to address the research questions. The paper concluded that most instructional materials required in the teaching of Geography were not adequately provided, although some of them were available, they were fairly utilized. Based on the findings of this study, the following recommendations were made: Adequate time should be allocated to the practical teaching of Geography in the secondary schools and Government and philanthropists should support public secondary schools and made available, adequate number of the instructional materials needed for effective teaching and learning of Geography.

KEYWORDS: Available, Adequacy, Utilization, Instruction Materials, effective teaching, effective learning and Geography

INTRODUCTION

Geography has a rich and extensive history of evolution, characterized by various phases of growth and decline, with each new era bringing changes to the concept of geography itself. The development of geographical thought and concepts was significantly influenced during the age of discoveries and explorations. As a discipline, geography equips learners with the ability to comprehend, manage, and utilize the resources available in their surroundings, facilitating a range of economic activities such as agriculture, fishing, lumbering, beekeeping, mining, and forestry (Onyango, 2019). It is a field dedicated to the examination of the Earth, its characteristics, and the relationships between humans and their environment (Kerski, 2013).

Geography is considered essential for providing individuals with the knowledge and materials necessary for success, as it reflects the realities of everyday human life. Reinfried and Hertig (2011) posited that geography addresses human-environment interactions across diverse contexts. In educational settings, geography holds significant importance as it imparts students with a variety of knowledge, skills, and values essential for understanding the world and making informed choices (Maantay, 2010). In Nigeria, geography is a crucial component of the senior secondary school curriculum, offering students a comprehensive understanding of both the physical and human aspects of their environment.

Additionally, Geography fosters the development of critical thinking and problem-solving abilities among students. Nonetheless, several factors can influence the teaching and learning of geography in senior secondary schools (Onuoha et al., 2021). The effectiveness of geography education is largely contingent upon the manner in which the subject is presented. Chilars (2013), as cited by Osumanu (2024), emphasized the importance of utilizing instructional materials effectively to enhance the teaching of any subject, particularly geography. Gray (2016) suggested that teaching and learning activities will be interesting when instructional materials are used effectively and efficiently in a classroom-teaching situation.

Wales (2013), as cited by Sugapriya and Ramachandran (2011), posited that the incorporation of instructional materials in educational settings aids students in retaining newly acquired information. In a similar vein, Alimi et al. (2012) contended that a thoughtfully designed and creative application of visual aids (instructional materials) during lessons can markedly diminish student disengagement, address the shortcomings of textbooks, and enhance students' interest and motivation by offering practical resources that also foster their ability to engage in discovery learning. Despite the extensive research conducted on the significance of instructional materials in geography education, several unresolved issues persist (Majasan, 2009; Abesida, 2003).

Given that geography aims to holistically address human challenges, numerous scholars have pointed out the evident scarcity of instructional materials and their application in classroom teaching and learning environments (Majasan, 2009; Abesida, 2003). This indicates that for instructional materials to effectively contribute to improving students' academic performance, knowledge retention, and skill application, they must be functional, sufficient, readily available, easily accessible, and appropriately utilized. Consequently, this study seeks to investigate the availability and utilization of instructional materials to enhance the teaching and learning of geography in secondary schools within Yola Metropolis, Adamawa State, Nigeria.

OBJECTIVES OF THE STUDY

The overall aim of this study is to critically examine the availability and utilization of instructional materials for effective teaching and learning of geography in senior secondary schools. Hence, the study will be channeled to the following specific objectives;

1. Determine the instructional materials required for effective teaching and learning of Geography in secondary schools.
2. Assess the level of availability of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State.
3. Assess the level of adequacy of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State.
4. Examine the level of utilization of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State.
5. Identify the factors affecting the availability and adequacy of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State
6. Identify the factors affecting the utilization of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State.

RESEARCH QUESTIONS

In the course of this study, the following questions will be addressed;

1. What are the instructional materials required for effective teaching and learning of Geography in secondary schools?
2. What is the level of availability of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?
3. What is the level of adequacy of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?
4. What is the level of utilization of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?
5. What are the factors affecting the availability and adequacy of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?
6. What are the factors affecting the utilization of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?

LITERATURE REVIEW

The Concept of Instructional Materials

The term "Instructional Materials" has evolved through various designations, beginning with the colonial notion of apparatus, transitioning to teaching aids, then to educational media, followed by instructional technology, and ultimately culminating in the contemporary term—instructional materials. Each phase of this evolution reflects the breadth of its application and relevance within the educational environment. Ibeneme (2000) noted that the term most widely accepted among education professionals is instructional materials, which he defines as resources that engage the sensory organs, including sight, smell, taste, touch, and hearing. Isola (2010) characterized instructional materials as tangible items that enhance the significance of teaching and

learning. He further described them as tools or devices that assist educators in clarifying lessons for students. Zakari (2015) elaborated that instructional materials encompass theoretical, practical, and skill-oriented resources that aid in teaching, learning, skill development, and the assessment of vocational courses. Sharma and Bozkurt (2024) emphasized that instructional materials serve as the instruments and resources that educators utilize to improve and facilitate the teaching process. These materials support the presentation of educational content, aiding in the clarification of concepts and directing the learning journey. They are designed to align with specific learning objectives and teaching strategies, focusing on the methodologies of instruction.

Instructional Materials for Teaching Geography in Secondary Schools

The Federal Republic of Nigeria (2012) outlined specific instructional materials deemed essential for effective teaching in secondary schools, including chalk, chalkboards, markers, marker boards, flat images, photographs, maps, models, real objects, motion pictures, textbooks, reference books, radios, audio tapes, computers, video recorders, video players, slide projectors, and overhead projectors, film projector, magnetic board, public address system, color television set, cameras, voltage stabilizer, handbooks, human voice, journals, magazines, newspapers, videotape or film, DVDs, CD-ROMs, internet, and interactive video conferencing, graphics including charts, posters, sketches, cartoons, graphs and drawings.

According to the findings of Prem, Tushar, Prithwiraj, Shankar, Sanjay, and Sanjit (2015), Zakari (2015), Okwelle (2014), and Oladejo, Olosunde, Ojebisi, and Isola (2011), instructional materials can be classified into several categories: Visual instructional materials, which enhance students' visual comprehension; Audio instructional materials, which consist of recorded sounds that can be mechanically or electronically reproduced; Audio-visual instructional materials, which engage both auditory and visual senses; Textual instructional materials, encompassing printed publications, documents, or records that facilitate effective teaching; and Projected instructional materials, which utilize electrical means to display clear images on a screen, creating a realistic teaching-learning environment.

Availability, adequacy, and utilization of instructional materials

Availability pertains to the resources and services accessible for fulfilling specific educational functions. Longman (2003) defines availability as the readiness and ease of access to resources. Onyejiemezie (2002) further emphasizes that availability involves ensuring a satisfactory standard of teaching resources to support effective instructional activities.

Adequacy encompasses not only the quantity but also the quality and relevance of these materials. For instance, many secondary school textbooks do not correspond with the current geographical curricula or provide updated information on environmental issues relevant to Nigeria, as noted by Ogunyemi and Okunola (2023). This disconnect can create gaps in students' understanding and impede their engagement with modern geographical challenges.

In separate studies, Uzuegbu, Mbadiwe, and Anunobi (2013), along with Ojo (2013), observed that some instructional materials like: chalk and chalk board, marker and marker boards, computers, CD-ROMS, Internet, e-mail, microfilm, microfiche, video tape, audio tape and slide projectors, marker boards, public address system, pictures, real objects, tape recorders and video tape recorders are available for teaching in Senior Secondary

Obidile and Obi (2020) undertook a study aimed at evaluating the adequacy, availability, and extent of the use of instructional materials in the educational process. The results indicated that the instructional materials necessary for teaching in secondary schools were insufficiently provided. Furthermore, while many instructional materials were accessible, they were often inadequate and underutilized. Usman (2016) highlighted that secondary school teachers in Nigeria function within an environment characterized by a lack of instructional materials.

Similarly, Muhammed (2017, as cited by Ousmanu, 2024) pointed out that the provision of instructional materials for teaching and learning in secondary schools has not received sufficient attention. The availability of instructional materials in the education sector can significantly influence their utilization. However, Odo and Ezeudu (2018) emphasized that the effectiveness of an instructional material serves as a true measure of its availability. Although the presence of instructional materials is essential for teaching and learning, their effective utilization is crucial for achieving quality learning outcomes (Nwafor & Eze, 2014; Makokha & Wanyonyi, 2015; Achimugu, 2017; Dhakal, 2017).

A survey conducted by Ibrahim et al. (2023) found that over 60% of geography teachers reported using maps that were over a decade old. This scenario restricts students' exposure to contemporary geographic phenomena and diminishes their capacity to apply theoretical knowledge in practical contexts.

Challenges Impacting the Availability, Adequacy, and Utilization of Instructional Materials Instructional materials play a crucial role in the educational process; however, various challenges impede their availability and effective use in geography education. According to the research conducted by Adakole, Eiriemiokhale, and Nnaji (2016), several factors adversely affect the accessibility of these materials in secondary schools, including insufficient funding, high capital requirements, inadequate maintenance, rising student enrollment, and negative student attitudes towards educational resources.

Acharu and Solomon (2014) argued that the lack of adequate infrastructural facilities is closely tied to insufficient government funding at all levels. They noted that Nigeria significantly falls short of adhering to UNESCO's recommendation that at least 26% of the national budget should be allocated to education. Consequently, many secondary schools operate under constrained financial conditions, limiting their capacity to acquire new textbooks and technological tools. Moreover, certain instructional materials, such as projectors, are costly and necessitate both technical skills and a reliable power supply for effective use. The situation is exacerbated by the inconsistent power supply in the country.

Abdullahi (2009) highlighted these issues as factors that compel educators to rely predominantly on lecture-based teaching methods, thereby marginalizing the involvement of students, who are essential to the educational process. Teachers and students encounter numerous challenges in the

effective utilization of instructional materials for quality teaching. Aun, Adaga, Ajala, Odunayo, and Adaaku (2020) pointed out the unavailability of necessary instructional materials for educators.

Additionally, Mupa and Chinooneka (2015) identified several obstacles, including insufficient time allocated for instructional activities, poor time management skills to adequately cover the curriculum, lack of government funding for instructional resources, and large class sizes, and insufficient training for teachers as challenges contributing to ineffective utilization of instructional materials in teaching and learning.

The absence of adequate facilities, such as libraries and computer laboratories, significantly worsens the situation by limiting access to a variety of educational resources (Mohammed et al., 2023). Usman (2016) highlighted the essential role of financial resources in either promoting or obstructing the availability and utilization of instructional materials. Furthermore, the level of student engagement can influence the effectiveness of instructional resources. Research suggests that students who participate actively in hands-on activities, such as using maps or digital tools, exhibit improved comprehension and retention of geographical concepts. Additional obstacles include restricted access to high-quality instructional materials due to financial limitations, challenges faced by teachers in incorporating new technologies or teaching methods, and a reluctance among some educators to adopt innovative instructional strategies or technologies, stemming from their preference for traditional methods (Darling-Hammond et al., 2017).

RESEARCH METHODOLOGY

The research was carried out in the Yola-Metropolis of Adamawa State, which includes Yola North and Yola South Local Government Areas (LGAs).

A survey research design was employed for this study. This design is a systematic method for gathering information from individuals through their responses to structured questions. The survey research design is preferred for its cost-effectiveness, broad reach across populations, flexible administration options, reliability of data collected through anonymity, availability of diverse methodological approaches for analysis, rapid data collection capabilities, and robust sampling techniques that enhance accuracy.

The study's population consists of all Geography teachers and students enrolled in Geography courses in secondary schools within the Yola Metropolis of Adamawa State. Due to the large number of secondary school, Geography Teachers and Students offering Geography in Yola-Metropolis of Adamawa State, the researchers selected a sample of 10 secondary schools, 250 students offering Geography and 20 Geography Teachers as respondents for the study. The researchers adopted the stratified simple random sampling technique to select the 270 respondents for the study.

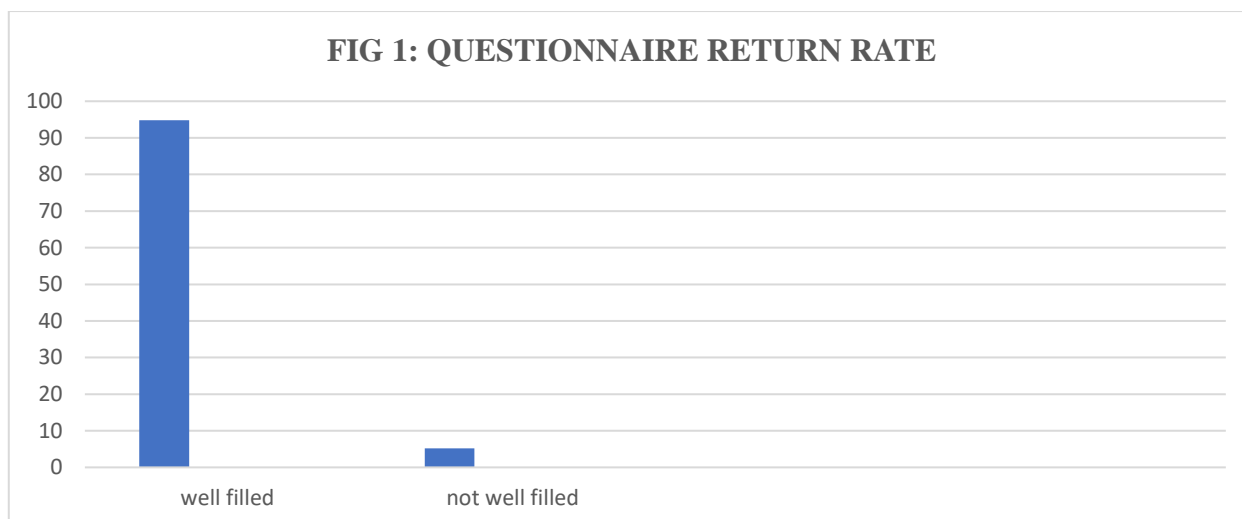
A questionnaire developed by the researchers, titled "Availability, Adequacy, and Utilization of Instructional Materials for Effective Teaching of Geography Opinion Questionnaire," served as the primary tool for data collection. This instrument comprised 70 closed-ended items, formulated using a modified 4-point Likert scale. The scale included Strongly Agree (A), Agree (A), Disagree (D), and Strongly Disagree (SD) for research questions 1, 5, and 6; Highly Available (HA), Available (A), Fairly Available (FA), and Not Available (NA) for research question 2; Highly Adequate (HA), Adequate (A), Fairly Adequate (MA), and Not Adequate (NA) for research question 3; and Highly Utilized (HU), Utilized (U), Fairly Utilized (FU), and Not Utilized (NU) for research question 4. The researchers administered the instrument to a total of 270 participants from the selected schools within the study area.

To ensure the content and construct validity of the instrument, it was reviewed by two experts in Geography Education at the Federal College of Education, Yola. A pilot study was conducted in the Numan Local Government Area, which, while not part of the main study area, shared similar characteristics. The reliability of the instrument was assessed using the Cronbach Alpha method, yielding an Alpha coefficient of 0.77.

For data analysis, simple percentages were utilized to evaluate respondents' bio-data and the questionnaire return rate, while the mean score method was applied to address the research questions. A decision threshold of 2.50 was established, indicating that an item is considered acceptable if the computed mean score is equal to or greater than 2.50, whereas an item is regarded as unacceptable if the computed mean score is below 2.50.

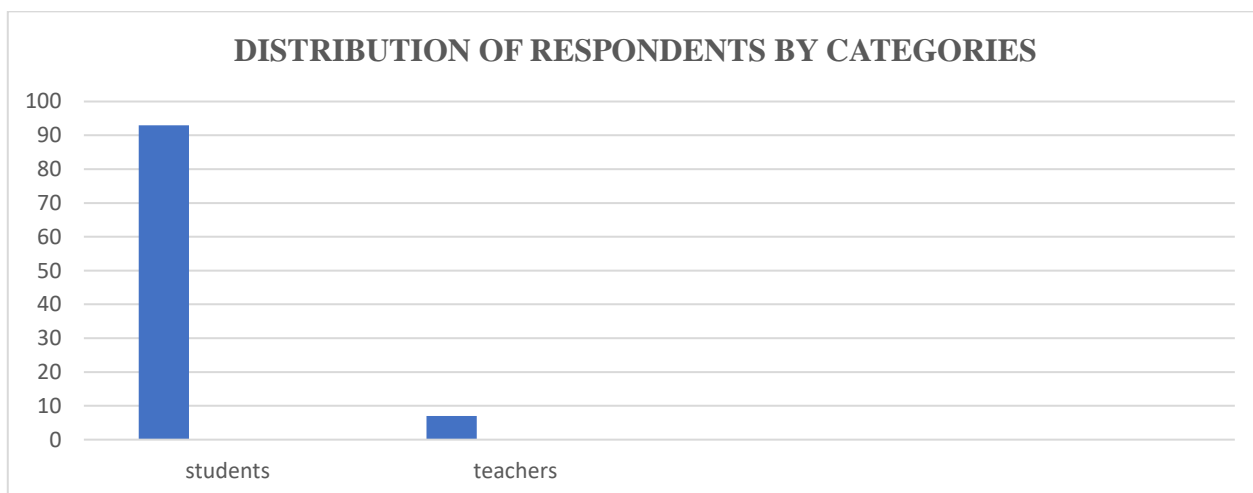
RESULT AND DISCUSSION

QUESTIONNAIRE RETURN RATE



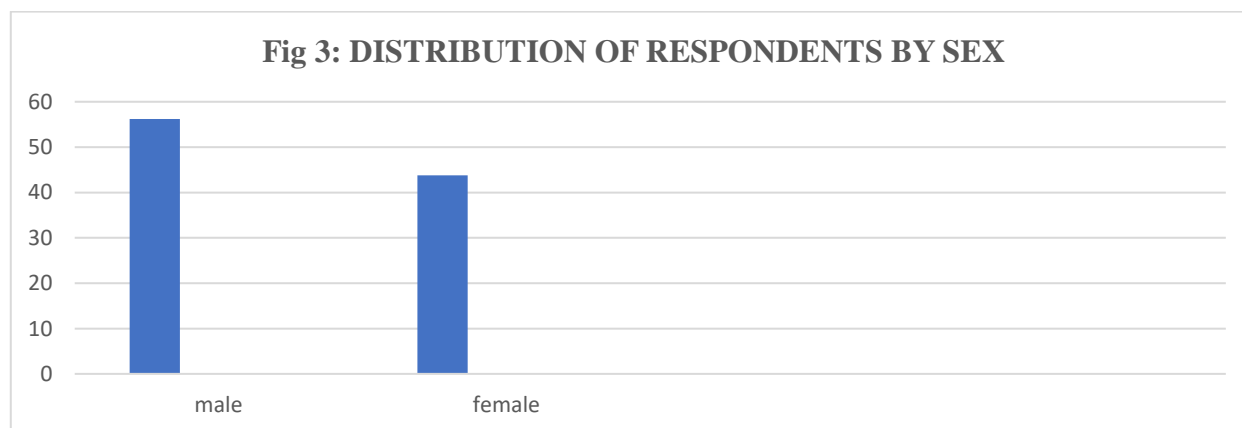
From the information in figure one it is clear that despite the fact that 270 questionnaire were distributed to 270 respondents, it is obvious that only 256 (representing 94.8) questionnaire were well filled and returned while 14 questionnaire (representing 5.2 percent) were either not returned or not well filled.

DISTRIBUTION OF RESPONDENTS BY CATEGORIES



From the information in figure two indicates that out of the 256 questionnaire that were well filled and returned, 238 (representing 93.0 percent) are students while 18 (representing 7.0 percent) are teacher

DISTRIBUTION OF RESPONDENTS BY SEX



From the information in figure three, 144 respondents out of the 256 respondents are male (representing 56.2 percent) while 112 (representing 43.8 percent) are female.

ANSWERING THE RESEARCH QUESTIONS

RESEARCH QUESTION ONE: What are the instructional materials required for effective teaching and learning of Geography in secondary schools?

TABLE 1 instructional materials required for effective teaching and learning of Geography in secondary schools

S/N	ITEMS	n=256	MEAN	DECISION
1	Flat pictures,		2.62	Agree
2	Photographs,		2.56	Agree
3	Maps,		2.53	Agree
4	Models,		2.72	Agree
5	Real objects,		2.51	Agree
6	Motion pictures,		2.60	Agree
7	Radio and audio tape,		2.59	Agree
8	Computers,		2.54	Agree
9	Television		2.61	Agree
10	Video recorder and player		2.58	Agree
11	Projector,		2.55	Agree
12	Magnetic board,		2.76	Agree
13	Public address system,		2.86	Agree
14	Journals, magazines, and newspapers,		2.68	Agree
15	Diagrams		2.69	Agree
CUMMULATIVE MEAN			2.63	Agree

Source: Research Survey December, 2024

From the analysis in table one above, it is clear that there are various instructional materials that can be used for effective teaching and learning of geography in secondary schools in Yola Metropolis of Adamawa State. These instructional materials include: Flat pictures, Photographs, Maps, Models, Real objects, Motion pictures, Radio and audio tape, Computers, Television, Video recorder and player, Projector, Magnetic board, Public address system, Journals, magazines, and newspapers, and Diagrams. This assertion is supported with calculated mean scores of range 2.51 to 2.86. These means are greater than the bench mark mean of 2.50.

RESEARCH QUESTION TWO: What is the level of availability of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?

TABLE 2: the level of availability of instructional materials for effective teaching of Geography in secondary schools

S/N	ITEMS	n=256	MEAN	DECISION
1	Flat pictures,		2.72	Fairly Available
2	Photographs,		2.62	Fairly Available
3	Maps,		2.75	Fairly Available
4	Models,		2.51	Fairly Available
5	Real objects,		2.52	Fairly Available
6	Motion pictures,		2.63	Fairly Available
7	Radio and audio tape,		2.52	Fairly Available
8	Computers,		2.78	Fairly Available
9	Television		2.66	Fairly Available
10	Video recorder and player		2.50	Fairly Available

11	Projector,	2.59	Fairly Available
12	Magnetic board,	2.71	Fairly Available
13	Public address system,	2.82	Fairly Available
14	Journals, magazines, and newspapers,	2.64	Fairly Available
15	Diagrams	2.61	Fairly Available
CUMMULATIVE MEAN		2.64	Fairly Available

Source: Research Survey December, 2024

From the analysis in table 2 it is clear that the level of availability of instructional materials for effective teaching of Geography in secondary schools is fair with a mean score range of 2.51 and 2.82. All the calculated mean score range are greater than the bench mark mean of 2.50. This means that: Flat pictures, Photographs, Maps, Models, Real objects, Motion pictures, Radio and audio tape, Computers, Television, Video recorder and player, Projector, Magnetic board, Public address system, Journals, magazines, and newspapers, and Diagrams are fairly available for effective teaching of Geography in Secondary Schools in Yola Metropolis of Adamawa State

RESEARCH QUESTION THREE: What is the level of adequacy of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?

TABLE 3: level of adequacy of instructional materials for effective teaching of Geography in secondary schools

S/N	ITEMS	n=256	MEAN	DECISION
1	Flat pictures,		2.53	Fairly Adequate
2	Photographs,		2.67	Fairly Adequate
3	Maps,		2.58	Fairly Adequate
4	Models,		2.68	Fairly Adequate
5	Real objects,		2.70	Fairly Adequate
6	Motion pictures,		2.65	Fairly Adequate
7	Radio and audio tape,		2.55	Fairly Adequate
8	Computers,		2.59	Fairly Adequate
9	Television		2.62	Fairly Adequate
10	Video recorder and player		2.73	Fairly Adequate
11	Projector,		2.87	Fairly Adequate
12	Magnetic board,		2.71	Fairly Adequate
13	Public address system,		2.68	Fairly Adequate
14	Journals, magazines, and newspapers,		2.63	Fairly Adequate
15	Diagrams		2.57	Fairly Adequate
CUMMULATIVE MEAN			2.65	Fairly Adequate

Source: Research Survey December, 2024

From the analysis in table 3 shows that the available instructional materials for effective teaching of Geography are fairly adequate this is supported with a cumulative mean score of 2.65 which is greater than the bench mark mean score of 2.50. This means that : Flat pictures, Photographs, Maps, Models, Real objects, Motion pictures, Radio and audio tape, Computers, Television, Video recorder and player, Projector, Magnetic board, Public address system, Journals, magazines, and newspapers, and Diagrams are fairly adequate for effective teaching of Geography in Secondary Schools in Yola Metropolis of Adamawa State

Research Question Four: What is the level of utilization of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?

TABLE 4: level of utilization of instructional materials for effective teaching of Geography in secondary schools

S/N	ITEMS	n=256	MEAN	DECISION
1	Flat pictures,		2.61	Fairly Utilized
2	Photographs,		2.59	Fairly Utilized
3	Maps,		2.51	Fairly Utilized
4	Models,		2.58	Fairly Utilized
5	Real objects,		2.72	Fairly Utilized
6	Motion pictures,		2.69	Fairly Utilized
7	Radio and audio tape,		2.50	Fairly Utilized
8	Computers,		2.53	Fairly Utilized
9	Television		2.67	Fairly Utilized
10	Video recorder and player		2.75	Fairly Utilized
11	Projector,		2.69	Fairly Utilized
12	Magnetic board,		2.61	Fairly Utilized
13	Public address system,		2.52	Fairly Utilized
14	Journals, magazines, and newspapers,		2.67	Fairly Utilized
15	Diagrams		2.71	Fairly Utilized
CUMMULATIVE MEAN			2.62	Fairly Utilized

Source: Research Survey December, 2024

From the analysis in table 4 it is clear that the fairly available and fairly adequate instructional materials for effective teaching of Geography are fairly utilized for effective teaching of Geography in secondary schools. This is supported with a cumulative mean score of 2.62 which is greater than the bench mark mean score of 2.50. This means that: Flat pictures, Photographs, Maps, Models, Real objects, Motion pictures, Radio and audio tape, Computers, Television, Video recorder and player, Projector, Magnetic board, Public address system, Journals, magazines, and newspapers, and Diagrams are fairly utilized for effective teaching of Geography in Secondary Schools in Yola Metropolis of Adamawa State.

RESEARCH QUESTION FIVE: What are the factors affecting the utilization of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?

TABLE 5: the factors affecting the utilization of instructional materials for effective teaching of Geography in secondary schools

S/N	ITEMS	n=256	MEAN	DECISION
1	Unavailable instructional materials for teachers to use		2.73	Agree
2	Insufficient time allocated for work,		2.87	Agree
3	Inadequate time management skills to cover the curriculum,		2.65	Agree
4	Insufficient training for teachers		2.59	Agree
5	Limited access to quality instructional materials		2.71	Agree
CUMMULATIVE MEAN			2.71	Agree

Source: Research Survey December, 2024

From the analysis in table 5 it is clear that the factors affecting the utilization of instructional materials for effective teaching of Geography in secondary schools are: Unavailable instructional materials for teachers, insufficient time allocated for work, inadequate time management skills to cover the curriculum, Insufficient training for teachers and Limited access to quality instructional materials. This is supported with a cumulative mean score of 2.71 which is greater than the bench mark mean score of 2.50.

RESEARCH QUESTION SIX: What are the factors affecting the availability and adequacy of instructional materials for effective teaching of Geography in secondary schools in Yola Metropolis of Adamawa State?

TABLE 6: The factors affecting the availability and adequacy of instructional materials for effective teaching of Geography in secondary schools

S/N	ITEMS	n=256	MEAN	DECISION
1	Inadequate funding		2.59	Agree
2	Capital intensive nature of the materials		2.51	Agree
3	Poor or lack of maintenance culture		2.57	Agree
4	Erratic power supply in the country		2.63	Agree
5	Inability of the teacher to improvise		2.77	Agree
CUMMULATIVE MEAN			2.61	Agree

Source: Research Survey December, 2024

From the analysis in table 6 revealed that the factors affecting the availability and adequacy of instructional materials for effective teaching of Geography in secondary schools are: Inadequate funding, Capital intensive nature of the materials, Poor or lack of maintenance culture, Erratic power supply in the country and Inability of the teacher to improvise. This is supported with cumulative mean score of 2.61 which is greater than the bench mark mean score of 2.50.

DISCUSSION OF THE FINDINGS

From the analysis in table one, it is clear that there are various instructional materials that can be used for effective teaching and learning of geography in secondary schools in Yola Metropolis of Adamawa State. These instructional materials include: Flat pictures, Photographs, Maps, Models, Real objects, Motion pictures, Radio and audio tape, Computers, Television, Video recorder and player, Projector, Magnetic board, Public address system, Journals, magazines, and newspapers, and Diagrams. This finding agreed with the findings of Prem, Tushar, Prithwiraj, Shankar, Sanjay, and Sanjit (2015), Zakary (2015), Okwelle (2014) and Oladejo, Olosunde, Ojebisi and Isola, (2011) and the provision of Federal Republic of Nigeria (2012)

From the analysis in table 2 it is clear that the level of availability of instructional materials for effective teaching of Geography in secondary schools is fair with a mean score range of 2.51 and 2.82. All the calculated mean score range are greater than the bench mark mean of 2.50. This means that: Flat pictures, Photographs, Maps, Models, Real objects, Motion pictures, Radio and audio tape, Computers, Television, Video recorder and player, Projector, Magnetic board, Public address system, Journals, magazines, and newspapers, and Diagrams are fairly available for effective teaching of Geography in Secondary Schools in Yola Metropolis of Adamawa State. This finding agreed with the findings of Uzuegbu, Mbadiwe and Anunobi (2013), and Ojo (2013)

From the analysis in table 3 shows that the available instructional materials for effective teaching of Geography are fairly adequate this is supported with a cumulative mean score of 2.65 which is greater than the bench mark mean score of 2.50. This means that : Flat pictures, Photographs, Maps, Models, Real objects, Motion pictures, Radio and audio tape, Computers, Television, Video recorder and player, Projector, Magnetic board, Public address system, Journals, magazines, and newspapers, and Diagrams are fairly adequate for effective teaching of Geography in Secondary Schools in Yola Metropolis of Adamawa State. This finding agreed with the findings of Obidile, & Obi (2020), and Usman (2016)

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From the analysis in table 5 it is clear that the factors affecting the utilization of instructional materials for effective teaching of Geography in secondary schools are: Unavailable instructional materials for teachers, insufficient time allocated for work, inadequate time management skills to cover the curriculum, Insufficient training for teachers and Limited access to quality instructional materials. This is supported with a cumulative mean score of 2.71 which is greater than the bench mark mean score of 2.50. This finding agreed with the findings of Adakole, Eiriemiokhale, and Nnaji (2016), Acharu and Solomon (2014)

From the analysis in table 6 revealed that the factors affecting the availability and adequacy of instructional materials for effective teaching of Geography in secondary schools are: Inadequate funding, Capital intensive nature of the materials, Poor or lack of maintenance culture, Erratic power supply in the country and Inability of the teacher to improvise. This is supported with cumulative mean score of 2.61 which is greater than the bench mark mean score of 2.50. This finding agreed with the findings of Abdullahi (2009), Aun, Adaga, Ajala, Odunayo, and Adaaku, (2020), Mupa and Chinooneka (2015), Mohammed et al., (2023). Usman (2016)

CONCLUSION AND RECOMMENDATIONS

The findings indicate that the instructional materials necessary for the effective teaching of Geography in Secondary Schools within the Yola-Metropolis of Adamawa State are neither fully available nor adequately utilized. The research revealed that while some instructional materials were present, they were not sufficiently provided or effectively employed in the teaching process. In light of these findings, the following recommendations are proposed:

1. Sufficient time should be dedicated to the practical instruction of Geography in secondary schools to promote the effective use of instructional materials by Geography teachers, thereby enhancing the skills necessary for self-employment.
2. It is imperative that both the government and philanthropists provide support to public secondary schools by ensuring the availability of an adequate number of instructional materials essential for effective Geography teaching and learning.
3. Schools should actively involve local communities and stakeholders in efforts to mobilize resources.
4. There is a pressing need for the implementation of professional development programs that focus on the effective utilization of resources
5. Increased funding from both state and federal governments is crucial for the acquisition of updated textbooks and digital resources.

REFERENCES

- Abdullahi, D. (2009). Relevance of instructional materials to teaching of Islamic studies. *Journal of Educational Research and Development*, 4(3):108-11
- Abesida K. A. (2003). *Readings in science education*. Ibadan: Majestic Printers and Publishers.
- Acharu, F. T. & Solomon, E. (2014). Influence of infrastructure on the teaching and learning of office education in Polytechnics. *ABEN Conference Proceedings 1* (1) 78-82
- Achimugu, L. (2017). Availability and utilization of instructional materials for teaching Chemistry in Senior Secondary Schools. *International Journal of Novel Research in Education and Learning* 4(3), 33-43
- Adakole, E. Eiriemiokhale, K. A. & Nnaji, F.O. (2016). Factors affecting availability of instructional materials in teaching and learning office technology and management in polytechnics in Niger State, Nigeria. *American Journal of Research Communication*, 4(10): 19-37 www.usa-journals.com
- Aun, T.T., Adaga, H.I., Ajala, T.M., Odunayo, D. & Adaaku, J.M. (2020). Challenges against Effective Teaching and Learning of Geography in Senior Secondary Schools in Ilorin Metropolis of Kwara State, Nigeria. *International Journal of Research and Scientific Innovation (IJRSI)* | 7(6), June. Pp77-83. www.rsisinternational.org.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective Teacher Professional Development*. Palo Alto: Learning Policy Institute.
- Dhakal, K. R. (2017). Availability and utilization of instructional materials in teaching Geography in Secondary Schools. *The Third Pole: Journal of Geography* 17, 51-58
- Gray, U. (2016). *Teaching and Learning English as a Second Language* (4th edition). Benin: New Era Publication
- Ibeneme, O.T. (2000). Provision and utilization of instructional equipment for teaching and learning science and technology. *Issues in Educational Journal*. 1(1): 139-144.
- Ibrahim, S.A. (2000). Instructional materials. *Journal-Teachers Periscope of NUT*, 8(7): 54-59.
- Isola, O.M. (2010). Effects of standardized and improvised instructional materials on student's academic achievements in secondary school physics. M.sc(Ed) Thesis, University of Ibadan.
- Kerski, J. J. (2019). "Emerging trends and new developments in geospatial technologies for education". *Journal of Geography in Higher Education*, 43(1), 1-11
- Longman (2003) *Longman Dictionary of Contemporary English*, 4th edition (book and CD-ROM).
- Maantay, J. (2010). Geography matters in health care. *Science*, 330(6003), 724-726.
- Majasan, A. O. (2009). African traditional music and the concept of copy right law. *Music in Africa: facts and illusions*. 105- 112. Ibadan: Stirling Horden.
- Makokha, R. N. & Wanyonyi, K. M. (2015). Utilization of instructional resources in teaching Kiswahili poetry in Secondary Schools in Kenya. *International Journal of Academic Research in Business and Social Science* 5 (8), 10-18.
- Nwafor, C. E. & Eze, S. O. (2014). Availability and utilization of instructional materials in the teaching of basic science in selected secondary schools in Abakaliki Education Zone of Ebonyi State, Nigeria. *Global Journal of Bio-Science and Biotechnology* 3(3), 292-295.

- Obidile, J. I. & Eze, P. C. (2018). Perceived effectiveness of instructional strategies for teaching business studies in secondary schools in Anambra State. *Unizik Journal of Education Graduates* 5(1), 34-40.
- Odo, J. A. & Ezeudu, S. A. (2018). Availability and adequacy of instructional materials, facilities and equipment for effective teaching and learning of mathematics in State and Federal Colleges of Educations in South East Geopolitical Zone of Nigeria. *European Journal of Education Studies* 4(4), 94-103.
- Mupa, P., & Chinooneka, T. I. (2015). Factors contributing to ineffective teaching and learning in primary schools: Why are schools in decadence? *Journal of Education and Practice*, 6(19), 125-132. (Online).
- Federal Republic of Nigeria (2012). Nigeria Certificate in Education Minimum Standards for Languages. National Commission for Colleges of Education.
- Ogunyemi W & Okunola, S.A. (2023). Roadmap to Quality Education in Nigeria <https://woleogunyemifdn.com/roadmap-to-quality-education-in-nigeria/>
- Ojo, G.T. (2013). Availability and use of instructional materials for teaching Yoruba in senior secondary schools in Ogbomosho North Local Government Area, Oyo State. *Journal of Educational Research and Development* 8(1): 121-131.
- Okwelle, P.C, & Allagoa, F.O.N. (2014). Enhancing Teachers' Competence in the use of Instructional Materials in Electronic education in Senior Secondary Schools in Nigeria. *Research on Humanities and Social sciences* 4(28): 20-25.
- Oladejo, M.A, Olosunde, G.R, Ojebisi, A.O, & Isola, O.M. (2011). Instructional Materials and Student Academic Achievement in Physics: Some Policy Implications. *Journal of Humanities and Social Sciences*, 2(1): 116 - 210.
- Onuoha, J., Eze, E., Ezeaputa, C. M. C., Okpabi, J. U., & Onyia, J. C. (2021). Does learning geography increase climate change awareness? A comparison of school subjects' influence on climate change awareness. *Journal of Geography*, 120(4), 140-151.
- Onyejiemezie, G. (2002). Availability and Utilization of School Resources in Nigerian Secondary Schools. *Educational Research and Reviews*, 9(17), 1450-1460.
- Osumanu S. J. (2024) Evaluating the Impact of Instructional Materials on Social Studies Learning Outcomes in Senior High Schools of the Bono East Region of Ghana Social Education Research <http://ojs.wiserpub.com/index.php/SER/> Copyright ©2024
- Prem, K. Y, Tushar, K.B, Prithwiraj, M, Shankar, Y, Sanjay, K.S & Sanjit, K.K. (2015). Audiovisual aids in teaching-learning process of health science students and professionals. *Journal of Universal college of medical science*. 3(4):50-53
- Alimi, O. S., Ehinola, G. B. & Alabi, F. O. (2012). School Types, Facilities and Academic Performance of Students in Senior Secondary Schools in Ondo State, Nigeria. *International Education Studies* 5(3), 44-48
- Sharma, R & Bozkurt, A. (2024). Transforming Education With Generative AI: Prompt Engineering and Synthetic Content Creation. <https://www.igi-global.com>.
- Usman, M. (2016). Assessment of the Availability and use of Instructional Materials by Secondary School Economics Teachers in Kwara State, Nigeria. Unpublished M. Ed Thesis, Ahmadu Bello University, Zaria, Nigeria
- Uzuegbu, C.P, Mbadiwe, H.C, & Anulobi, J.C. (2013). Availability and Utilization of Instructional Materials in teaching and learning Library education in tertiary Institutions in Abia State. *Wudpecker Journal of Educational Research*, 2(8), 111-120. Retrieved on December, 2014 from <http://wudpeckerresearchjournals.org/WJER/pdf>.
- Sugapriya G, Ramachandran C(2011).Assessing visual memory in slow learners by teaching with computer animated models. *International Journal of Medical Research*.2(4),946-949
- Zakari, G. (2015). Effects of Improvised Instructional Materials on performance of Senior Secondary School students in Islamic studies in Kaduna state, Nigeria. Unpublished M.Ed. Dept. of Curriculum and Instruction, ABU, Zaria.