

A Survey of Inventory and Usage of Instructional Materials for the Teaching of Geography in Secondary Schools in Oyo Metropolitan

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Abstract

The study focused on the survey of inventory and usage of instructional materials for the teaching of Geography in selected schools in Oyo Township. Data for this study was collected through the use of questionnaire instrument tagged (ASIUM), (A Survey of Inventory and Usage of Instructional Materials for the Teaching of Geography). The study covered 20 public schools and the respondents were mainly 20 Geography teachers of selected schools in the four Local Government Area of Oyo Town. Simple percentage was used to analyse the data collected while test was used to test the stated hypothesis and the findings revealed acute low level of stock of instructional materials in schools. Also, teachers' attitude towards usage of instructional materials was not gender biased. It was however recommended that government should as a matter of urgency provide schools with necessary equipment and instructional materials and that principals of schools should enlighten Parents Teachers Association on the need to compliment government efforts in providing necessary teaching materials to all schools amongst others.

Keywords: *Inventory, Attitude, gender, equipment.*

Introduction

Over the years, a great number of senior secondary schools have been facing a lot of problems among which is poor academic performance of students in various subjects, Geography inclusive. For maximum performance of students in any subject or discipline, the availability and usability of instructional materials cannot be over-emphasised. Effective teaching arrests the attention of students and stimulates their interest and teachers should not have at their disposal only their voice if they want to have effective teaching, they need to make use of available instructional material which may prove useful in planning teaching programmes for students.

Instructional materials are the tools used in educational lessons which include active learning and assessment. Basically, any resource a teacher uses to help him teach his students is an instructional material. Instructional materials are those materials the teacher uses to help him teach effectively and make students understand the lesson clearer. They include projected, non-projected, print and others such as 3-dimensional objects that are produced through locally sourced materials, program instruction, instruction package among others.

Statement of Problem

Geography as a spatial distribution of phenomena on the earth surface needs both theoretical and practical exposition. The results of external and internal examination in Geography have not

been encouraging despite the efforts of teachers in ensuring excellent results from the examinations, the pertinent questions then are, what are the stock level of necessary instructional materials for the teaching of geography in secondary schools and what is the nature of usability of these resources if they are available for the teaching of Geography. This study seeks to provide answers to these questions.

Research Questions

The following research questions were put forward for this study.

1. What is the stock level of instructional materials for the teaching of Geography in selected secondary schools?
2. Are teachers adopting the usage of instructional materials while teaching different concepts of to the students?
3. What is the attitude of Geography teachers to availability and usage of instructional materials for the teaching of Geography in schools?
4. Is there any negative effect of not using instructional materials in teaching Geography in schools?
5. Is there any effort by the teachers to improvise the instructional materials where necessary and possible?

Also, the following hypothesis will be tested during the course of this research.

H₀: There is no gender bias in teacher's attitude towards the usage of Instructional materials

Research Methodology

The research method adopted for this study was descriptive. This is a type of research based on information gathered through questionnaire and as such answers were sought to research questions. The study population was divided into four areas using stratified sampling technique, thereafter five schools were randomly selected from each area. The researchers used simple random sampling to collect the data, respondents were randomly selected from the entire population. The sample consists of both male and female teachers from selected schools from Oyo West, Oyo East, Atiba and Afijio Local Government Area of the town.

The major instrument for data collection was a researchers designed questionnaire instrument titled: a survey of Inventory and Usage of Instructional materials for the teaching of Geography (ASIUM).

The questionnaire has three sections, Section A sought for demographic data of the respondents, section B sought for inventory of the instructional materials available in each school and section C sought for attitude and usability of the available instructional materials by the teachers. Section B goes with options available and non-available while Section C adopted a four likert-scale model of Strongly Agree (SA), Agreed (A), Strongly Disagreed (SD) and Disagreed (D) to measure the attitude and usability of teachers towards instructional materials. A re-test reliability method gave a reliability of 0.86. The instrument administration recovered 100% return rate. The data obtained were analysed using descriptive statistics such as percentages, mean and standard deviation.

Literature Review

At every level of geographical growth and development attempts have been made to define

Geography. Adedokun, et al (2011) defined Geography as a subject concerned with providing accurate, orderly, rational description and interpretation of the variable characters of the earth surface. They also defined Geography as the study of relations between society and natural environment.

To achieve the objectives of Geography education, appropriate skills need to be applied by teachers in their teaching. A number of skills are therefore necessary for the teacher: skills needed to make him enriched and bigger than life (Onasanya, Adegbija, Olurmorin and Daramola, 2008). The skills expected from the Geography teacher include the use of resources as a way of physically extending his ability to communicate. The resources are to be used when appropriate to increase students' learning especially where the resources are used as personal extension of the teachers. In teaching Geography, the teacher must therefore acquire the necessary skills for him to have the capacity to fully utilize the appropriate resource in teaching Geography.

For the teachers to make their contribution in realising the objectives of Geography, they must utilize adequate resources essential in the teaching of the subject. This means, they must be knowledgeable; know what they have to teach and how they are going to teach them. This is the gateway towards ensuring resources utilization. Therefore, the objectives of Geography in schools were stated as; needs for selective teaching, the appreciation of Geography as a dynamic subject, and the facilitation of international solidarity (Kozah, 2007).

Concept of Instructional Material

Abdullahi (1997) explained that instructional media referred to “anything a teacher will use as medium of communication when they are used to carry messages with an instructional intent to enrich the curriculum content and consequently enhance the educational process. He further explained that these materials may includes simple living things and non-living things in the immediate environment like stones, leaves, concrete mixer, aggregates, the chalkboard, printed materials e.g. charts, maps, designs, drawings, photographs, models and real things to sophisticated things like audio and video machines, projectors, and the computers. Abdullahi (1997) posited that students who had the advantages of being taught with selected and wisely utilised instructional media learn more effectively than those who are only provided with verbal instruction, Natoli (2011) states that instructional materials are also referred to as audio visual which comprise works with both a sound and a visual component, the production or use of such works or equipment used to create and present such work. Slide tape presentation, film and television programme are example of audio-visual presentation. Bassey (2002) describes instructional media as system components that may be used as parts of instructional processes which are used to disseminate information, message and ideas or making difficult concept understood easily. Tijani (2007) reports that the use of instructional materials significantly improves the academic performance and creative thinking of subjected studies.

Ogunsanya (2004) in his own view described teaching aids as anything that helps the teachers to promote effective learning process. It can be deduced from this definition that anything which the teacher uses during his teaching in order to make it more meaningful and effective is a teaching aids or instructional materials. Adesina (1993) opined that the argument for the use of educational media in secondary schools is the ability to stimulate students through both visual, auditory control especially where the classes are extremely large.

According to Ibeneme (2000), the federal and state government are aware of the importance of instructional materials in teaching, they cannot do much because of the high foreign exchange rate and poorly monitored economy in the community. On instructional methods, the instructor should use a variety of methods to meet the needs of different learning styles (Morrison, et al, 2001). Each

method should also involve multiple components to attain the highest possible desired result (Reigeluth, 1999). Regardless of content, the instructor should follow four (4) main methods. Gain the learner's attention, present information, provide practice materials, and provide feedback. Then the components of the methods can be appropriately adapted for different instructional scenarios, ensuring customizable instruction. Consequently, discussion on further review will be situated on this theory of instructional materials. The three (3) parts the instructor should use to gain the learner's attention (Nate, 2006 in Gagne, 1986) are appealing to the interest of the learner, identifying instructional reference, stimulating prior knowledge.

Accordingly, Agina-Obu (2005) defined instructional materials as tools or materials improvise or imported for teaching and learning in order to help the students and teachers on the process of impacting knowledge. He described them as concrete or physical objects, which provide sound, visual or both to the sense organs during teaching.

Onasanya (2004) gave various kind of models used in educational instructional materials such as mental models, theoretical models, mathematical models, diagrams, concrete models etc. These types of models are of special pedagogic significance in science, social science (which Geography is one of the subjects) and technology instruction due to the nature of knowledge and knowledge getting process in these disciplines. Concrete models are instructional materials or objects which have likenesses to natural or manmade structure or system and which are intended to highlight and explain or describe structures, functional processes and relationships in the original. Concrete models are constructed in the effort to understand the behaviour of the physical world and the causes of such behaviour (Onasanya and Adegbija, 2008). The role of concrete models is summarised as follows: Simplification of Complex Phenomena: Concretization of complex phenomena, bridging of gaps in distance and time between phenomena and classroom events, enhancing of students to communicate for the important roles which these models can play in teaching and learning process by the uses of instructional materials.

Educational Instructional Materials in Teaching and Learning Geography

Some educational instructional materials in teaching and learning Geography include:

Maps and Globes

Maps and globes are very important in the teaching of Geography. In a research conducted by Kozah (2007), the researcher showed the maps and globes are universally accepted as significant instructional materials in teaching and learning Geography, social studies, history etc. their value lie in their ability to give an almost accurate visual representation of the earth's surface, which makes the study of large and remote areas more accurate and meaningful.

Ajaegbuna (1969) cited by Sofowora and Egbedokun (2010) also described that one of the major problems associated with the teaching of Geography in Nigeria were the low enrolment of students in the course and the method of communication, students saw Geography as a collection of "dead statement" presented as facts. Sofowora and Egbedokun (2010) resolved that application of appropriate teaching materials in the teaching of geography could help solve the problems faced in teaching the subject. In fact, it was a long belief in educational technology that instructional materials are essential for effective teaching and learning.

Lawal, Dora and Julius (2014) stated that secondary schools students' attrition in geography had been traced to inadequate teachers and inept teaching of the subject. They explained that one of the major causes for the students' backwardness or poor performance in the subject at the secondary school level was the acute shortage of geography teachers, which impedes the smooth transition of students from social studies in junior classes (JSS) to geography in senior classes (SSS). Abdullahi

(1997) lamented that “the availability of media both hardware and software to our schools was very discouraging, lack of these media or improper use of same is now a major concern which could easily cause distress among technical teachers.

Results and Discussion

The survey was responded to by 20 geography teachers representing 20 secondary schools in Oyo metropolitan area. Five schools from Oyo West Local Government, five schools from Oyo East, five schools from Atiba while the remaining five come from Afijio Local Government Area of the township.

Personal Characteristics and Teaching Experience of Teachers

Table 1:

Sex of Respondents	Frequency	Percentage
Men	15	75
Women	5	25
Total	20	100

Most of the respondents (75%) were men, with 25% of respondents being women. The ages of the teachers who responded to the survey were between 25 - 30years and above 40years with 25 – 30years having 0%, 31-35years having 25%, 36 – 40 years having 50% and above 40years having 25%.

In terms of working experience, teachers with 6-10years having 20% of teaching experience teaching experience 11 – 15years having 55% while teaching experience above 15years having 25%. Qualifications of the respondents, out of all the respondents in various schools sampled, those with B.Sc./B.Ed. qualification have 90% while 10% of the teachers possess NCE qualification that this is a good signal to the fact majority of the teachers are university graduates. In terms of work load, 10% of the teachers teach only SSS I class only, 15% of them teach SSS I and SSS II only while 85% teach SSS I, SSS II and SSS III. This is a wrong signal, it pictures the excesses of the load carry by the teacher simply because of the shortages of Geography teachers in most of the public schools in the state.

Research Questions

Research Question I: What is the stock level of instructional materials for the teaching of Geography in selected secondary schools?

Table 2: Stock Level of Instructional Equipment/Materials for the Teaching of Geography

		Available		Non - Available	
		No	%	No	%
1.	Globe	12	60	8	40
2.	Climate chart	-	-	20	100
3.	Temperature Chart	-	-	20	100
4.	Rainfall Chart				
5.	Relative Chart	1	05	19	95
6.	Station Model	-	-	20	100
7.	Atlas Map	09	45	1	05
8.	Temperature	04	20	16	80
9.	Rainfall Maps	04	20	16	80
10.	Chart of whether symbol	-	-	20	100
11.	Relative Humidity Map	03	15	17	85
12.	Pie Chart	02	10	18	90
13.	Density Maps	04	20	16	80
14.	Wind Vane	-	-	20	80
15.	Thermometer	-	-	20	80
16.	Sun Dial	-	-	20	80
17.	Anamometer	-	-	20	80
18.	Hygrometer	-	-	20	80
19.	Maps showing national grids	05	25	15	75
20.	Soil profiles	-	-	20	80
21.	Ordinance Survey Maps	-	-	20	80
22.	Survey Equipment	-	-	20	100
23.	Topographical Maps	08	40	12	60
24.	Geographical Garden	-	-	20	80
25.	Projector	-	-	20	80

Data in table one x-ray the stock level of instruction materials in various schools sampled, the

result shows low level of stock of the necessary materials that could have assisted the students in understanding various concepts in geography, of all the materials listed only globe with 60% availability, relative chart with 5% availability, atlas map with 45%, availability temperature chart with 20% availability, rainfall maps 20% availability, relative humidity map with 15% availability, various pie charts with 10% availability, density maps with 20% availability, maps showing national grids with 25% availability, while topographical maps with only 40% availability, all other equipment/instructional materials are not available in all schools sampled. The most missing equipment in all schools sampled are survey equipment and despite the fact that surveying as a topic has been included in senior secondary schools curriculum, the absence of these equipment will definitely has a negative impact on the teaching of surveying.

Research Question 2: Are geography teachers adopting the usage of geography instructional materials while teaching different concepts of geography to the students.

Table 3: Teachers Attitude towards Usage of Instructional Materials

	Statement	SA	A	SD	D
6.	I have positive attitude towards usage of instructional materials for the teaching of geography subject	8(40%)	12(60%)	-	-
14.	Most teachers are too lazy when it comes to usage of instructional materials for the teaching of geography concept	2(10%)	3(15%)	13(65%)	2(10%)

The data from the table 2 shows the readiness of geography teachers in embracing the use of instructional materials as item 6 (40%) at Strongly Agreed and 60% of agreement while item 14 has 10% of SA, 15% of Agreement and 65% of Strongly Disagree and 10% of Disagreement. Teachers are fully ready to use the instructional materials if available but their non-availability pose discouragement to the teachers.

Research Question 3: What is the attitude of Geography teachers to availability and use of instructional materials for the teaching of geography subjects in schools

Table 4

	Statement	SA	A	SD	D
8.	Non-availability of necessary instructional materials discourage teachers and kill their morale	8(40%)	5(25%)	7(35%)	-
18.	Since government has not provided the materials teachers do not access and use equipment while teaching	6(35%)	9(45%)	2(10%)	3(1%)

The data from table 3 shows the attitude of teachers to availability and use of instructional materials as item 8 has 40% of SA, 25% of Agreement while 35% of Disagreement is recorded, this shows bad attitude of teachers to non-availability of necessary instructional materials as this kill their morale and set in discouragement for effective teaching and learning of geography.

Research Question 4: Is there any negative effects of not using instructional materials in teaching Geography in Schools?

Table 5: Negative effect of Not Using Instructional Materials

	Statement	SA	A	SD	D
4.	Not usage of instructional materials in teaching geography pose no negative effects to academic performance of students	2(10%)	-	15(75%)	3(15%)
9.	Without necessary instructional materials students can still pass excellently	-	4(20%)	12(60%)	4(4(20%))

The data from the table 4 answers the question pose on research question 4 if there is no negative effect of not using instruction for the teaching of geography as item 4 has 75% of strongly disagreement and 15% of disagreement that not usage of instructional materials in teaching geography pose no negative effect to the academic performance of students. In essence, non usage of instructional materials pose serious danger to the academic achievement of the students, geography being an abstract in nature needs to be simplified by the use of instructional materials.

Research Question 5: Is there any effort by the teachers to improvise instructional materials where necessary and possible?

Table 6: Improvisation of Instructional materials

	Statement	SA	A	SD	D
15.	Teachers need to improvise the instructional materials when they are not available	6(30%)	14(70%)	-	-
16.	Improvisation of necessary materials for the teaching of various concept in geography is necessary	12 (60%)	8 (40%)	-	-

The data from table 5 show if there is any efforts by the teachers to improvise the instructional materials where necessary and possible; as item 15 has 30% of SA, and 70% of Agreement that teachers need to improvise the instructional materials while item 16 has 12 (60%) of Strongly Agree and (40%) of Agreement.

Testing of Hypothesis

Table 7: T-test for male and female teachers on their attitude towards usage of instructional materials

Attitude towards Institutional Materials	N	Mean	Std. Dev.	t - cal	df	S ign	t - critical
Male	15	4.26	2.70		0.40		
Female	05	3.25	11.65	21	1.02	0.05	0.62

Significant at $P > 0.05$

From the table above, calculated t is 0.62 with 21df and $p > 0.05$ level of significance, the null hypothesis is not rejected. Hence, there is no gender difference of teachers attitude towards usage of instructional materials.

Conclusion

Premise on the results of this study, it could be concluded that usage of instructional materials are necessary for the effective teaching and learning of various geographical concepts and the shortage or low stock of equipment and materials in various schools sampled x-rays unwillingness on the part of the government in providing necessary materials so as to make teachers' teaching effective and rewarding.

Recommendations

The study therefore recommended that:

- * Government as a matter of urgency should provide necessary equipment and materials for the teaching of Geography in all public schools.
- * School principals should enlighten Parents Teachers Association on the need to support government's efforts in providing the necessary instructional materials for all the subjects being offered in schools especially Geography.
- * Teachers need to be trained and retrained on the improvisation of instructional materials where government fails to provide such.
- * Government should also organise seminars, workshops and conferences in a bid to sensitize teachers on the usage and improvisation of instructional materials.
- * Teachers should also endeavour to use their skills to simplify abstract nature of Geography.

REFERENCES

- Abdullahi, M. (1997). *An Introduction to media and methods* Lano: Gidan Dabino Publishers.
- Adesina, S. (2004). *Secondary education in Nigeria*, Ile-Ife University Press Limited.
- Adedokun, O. M. & Jamu, G. (2011). *Perspectives on the History and development of Geographical ideas*. Oyo East: ESONAJ Ent.
- Aderogba, K. A. (2012). Improvising teaching and learning aids in classes of Geography in Ogun State (Nigeria) Senior Secondary school (SSS) *International Journal*, Vol. 3(8), pp. 692-697.
- Agina-Obu, T. N. (2005). *The Relevance of Instructional Materials in teaching and Learning in Robert Okah, I. and Uzoeshi, K. C. (Ed.) Theories and Practice of Teaching*, Port Harcourt Havey Publication.
- Ibeneme, O. I. (2000). Provision and utilization of instructional equipment for teaching and learning an issue in *Educational Journal*.
- Kozah, E. (2007). *Perspective of Geography: Geography and the methodology of Geography Teaching*, Publishing in Nigeria by Tamaza Publishing Co. Ltd.
- Morrison, G. R., Ross, S. M. and Kemp, J. E. (2011). *Designing Effective Instruction*, (3rd Edition). XXVI-26 Tew Jersey: John Wiley and Sons, Inc.
- Ogunsanya, M. C. (1994). *Introduction to methodologies of social sciences*, Ibadan: Evans Brother Publishers.
- Olowu, F. A. (2005). *Educational Technology, a Conceptual Guide*, Ijebu Ode Godolom Books.
- Onasanya, S. A. (2004). Selection and utilization of instructional media for effective practice teaching. *Institute Journal Education*, 2: 127 – 133 Direct Link.
- Sofowora, O. A. and Egbedokun, A. (2010). An Empirical Survey of Technology Application in Teaching Geography in Nigerian Secondary Schools. *Ethiopian Journal of Environmental Studies and Management*, Vol. 3, No. 1, 2, pp. 46-54.