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**AVAILABILITY AND UTILIZATION OF  
INSTRUCTIONAL MATERIALS IN TEACHING  
COMPUTER STUDIES IN SECONDARY SCHOOLS IN  
GWANDU METROPOLIS, KEBBI STATE**

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Availability and Utilization of Instructional Materials in Teaching Computer Studies in  
Secondary Schools in Gwandu Metropolis, Kebbi State

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**Abstract**

This study investigated the availability and utilization of instructional materials in teaching computer studies in secondary schools in Gwandu metropolis. The poor performance of students recorded for computer studies within Kebbi State was the driving force in carrying out this study. To carry out this investigation, 45 teachers and 3,385 students in three schools from Gwandu metropolis were selected using stratified random sampling technique. Raw score from respondents with other data obtained from a questionnaire and in-depth interview were used for computation. Analysis of the data obtained was analyzed using frequency and percentile interpretation and content analyses. Findings from the computation showed that there are adequate instructional materials where 56.7% of respondents are in agreement that Government should be responsible for the provision of instructional materials to schools while 43.3% have a contrary view. Based on the findings, it is then recommended that government at all levels; Local, State and Federal governments join hands together to enact policies or law encouraging only professionally trained computer science teachers to teach computer studies in secondary schools. The availability of instructional materials should be supported with routine maintenance. Train teachers on the need of improvisation and in addition procure new materials after a period of at least ten (10) years. This would certainly enhance availability and utilization of instructional materials in secondary schools.

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**Introduction**

Education is recognized as an indispensable tool for national development and an avenue for empowering citizens of any nation. Education has great potentials for the transformation of individuals and the society as it is one of the major yardsticks for measuring the progress, civilization and development of humankind in any organized society. Thus, education has continued to be important and this is why there has been a growing concern in recent years about the quality of education that is offered at all levels of education in Nigeria especially secondary education level (Ogoh, 2018). This is in view of the importance of secondary education as the cornerstone of educational systems as it either prepares students for higher education or equips those who may not be able to go further in education with skills to succeed as employees or entrepreneurs. Abdu-Raheem (2014), acknowledged that instructional materials are used by teachers to aid explanations and make learning of subject matter understandable to students during teaching and learning process. Instructional materials are essential and significant tools needed for teaching and learning to promote teacher's efficiency and capture the student's attention in classroom situation.

On the other hand the Millennium Development Goal Project (MDG's, 2011), defined instructional materials as all the resource that a teacher uses to help him or her explain the topic/content/subject to the learner; so that the pupils will fully comprehend the topic. Instructional materials also known as teaching/learning materials are any collection of materials including animate and inanimate objects and human and non-human resources that teacher may use in teaching and learning situation to help achieve desire learning objectives. Instructional materials may aid a student in concretizing a learning experience so as to make learning more exciting, interesting and interactive because student learn easily through what they see and touch. Instructional materials therefore constitute the media of exchange through which a message transaction is facilitated between a source and a receiver. In addition to extending the range of materials that can be used to convey the same instructional message to learners, instructional materials also facilitate the process nature of communication. In this passage, the process nature of communication implies that both the source and the receiver of a message are actively involved in a communication encounter. It simply means that the receiver and the source share and exchange ideas, feelings in any communication (Tyler, 2014).

According to Agbulu and Wever (2011), instructional materials are important because they are used for the transference of information from one individual to another, help the teacher in extending his learner's horizon of experience, stimulate learners' interest and help both teachers and students to overcome physical limitations during the presentation of subject matter, among others. The instructional materials required for effective teaching of fish production to students in senior secondary schools include nursery tanks/ponds, demonstration ponds, scoop nets, hatching troughs, aquaria tanks, compounded feeds, charts and pictures, video clips. Instructional materials are defined as resources that organize and support instruction, such as textbooks, tasks, and supplementary resources (Remillard and Heck, 2014). Instructional materials refer to the human and non-human materials and facilities that can be used to ease, encourage, improve and promote teaching and learning activities. They are whatever materials used in the process of instruction. The Soviet encyclopedia defines instructional materials as educational resources used to improve students' knowledge, abilities, and skills, to monitor their assimilation of information, and to contribute to their overall development and upbringing. Instructional materials are generally recognized as vital tools that every secondary school teacher must acquire, if they are to function effectively in the classroom. However, these advantages of instructional materials have not been fully reflected in the educational system because of the dearth of these instructional materials in schools.

Dhakal (2017) postulated that the use of instructional materials gives the learner opportunity to touch, smell or taste objects in the teaching and learning process. Knowledge and skill can be passed into students with different types of relevant instructional materials. The use of instructional materials becomes very crucial in improving the overall quality of the learning experiences of school level students. Yazid *et. al.* (2020) stated that instructional materials make teaching and learning more meaningful, understandable and easy. But in spite of the benefits of instructional materials to teaching and learning, the scarcity and inadequate utilization of the instructional materials has hindered, to some extent, the efficiency of teaching and learning. Sale (2016) reported that instructional material will aid effective teaching delivery at the junior secondary schools. Obviously, teacher utilization of the materials will aid improve students' learning in the classroom. Onajite and Aina (2014) affirmed that utilization of instructional materials will improve both teaching and students' learning towards achieving measurable objectives in business education. Nbina in Muza (2020) also stated that schools through government should provide expensive textbooks and other materials that will facilitate teaching and learning.

Achimugu (2016) reported that most instructional materials for teaching science were neither available nor utilized for teaching-learning process. The implication of these reports calls for more research efforts in this direction. Ibrahim cited in Asogwa (2013) observed that availability refers to the condition of being obtainable or accessible at a particular point in time. It expresses how a material can easily be gotten and used for a particular purpose and time. It also states how operable or usable resources are upon demand to perform its designated or required functions. Raghu in Asogwa (2013) stated that utilization is the primary method by which asset performance is measured and business determined. It is the transformation of a set of input into goods or services. It on this note that the study sought to find out the level of the availability and utilization of instructional materials as essential tools that can make learning, practical and knowledge acquisition easier in teaching computer studies in senior secondary schools in Gwandu metropolis.

### **Statement of the Problem**

Teaching Computer Studies in Secondary Schools is still faced with many challenges, ranging from qualified teachers, trained technologist, sufficient computer systems/gadgets, laboratories, constant power supply and stable internet services. This numerous issues are not only faced in urban areas but may even be worst in schools located in rural areas. Gwandu is a local government area although with a lot of elites who are resident in the urban areas of Birnin Kebbi Metropolis; the three (3) schools located in Gwandu town are faced with the challenges mentioned above with each having a peculiarity. Thus, the need for the research.

### **objectives of the Study**

The main aim of the study is to:

- (i) Investigate the availability of instructional materials for teaching computer science in secondary schools in Gwandu Local Government Area of Kebbi State
- (ii) To know if the instructional materials are utilized effectively for teaching computer studies in secondary schools in Gwandu Local Government of Kebbi State

### Research Questions

- (i) To what extent are instructional materials available in teaching computer studies in secondary schools in Gwandu Metropolis of Kebbi State?
- (ii) To what extent are the instructional materials being utilized in teaching Computer Studies in Secondary Schools in Gwandu Metropolis of Kebbi State?

### Methodology

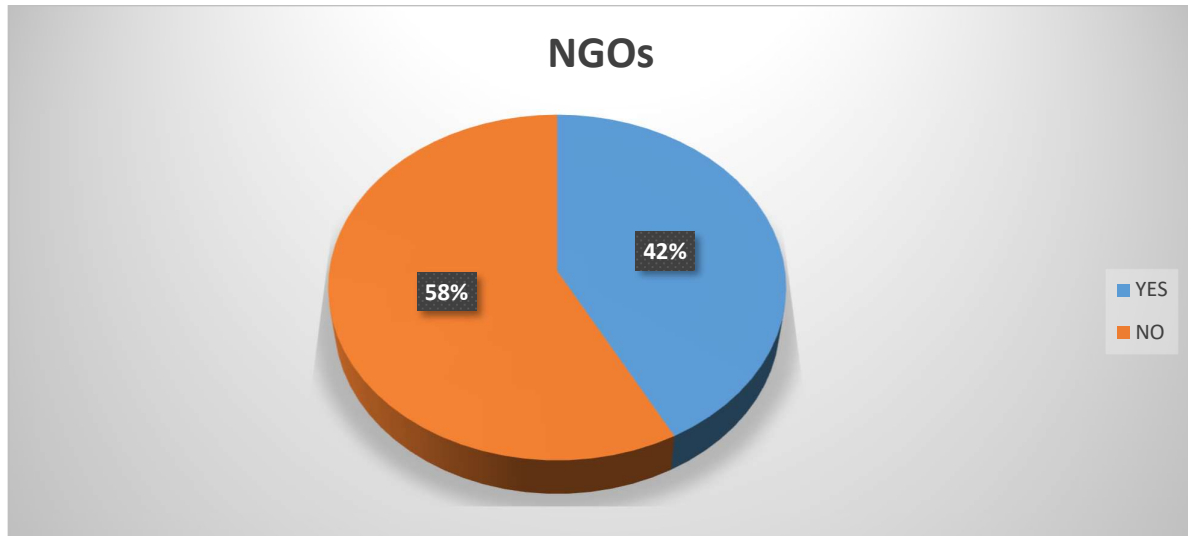
To answer the research questions stated in this work, the descriptive survey technique was employed. The population used for the study is students of both sexes studying within Gwandu metropolis with a total number of 3,585 students and 45 teachers from three (3) schools. Using the Krejcia and Morgan table a sample of 848 students and 43 teachers were selected after conducting a stratified random sampling. The instruments for data collection were in-depth interview and a questionnaire. The advantage of the questionnaire is to collect data from a large number of respondents. The questionnaire requested respondents to indicate category of response they believed to be true or false depending on their understanding and perspective. The instrument was validated by experts from Faculty of Physical Sciences, Kebbi State University of Science and Technology, Aliero. The reliability of the instrument was achieved by using a test re-test method; a pretest was carried on 15 students in Argungu Local Government at an interval of two weeks. The scores obtained were collected using Spearman rank order coefficient technique and the index arrived at was 0.78. For collection of data, questionnaires were administered to the students at their various schools by the researchers. The raw data collated from the questionnaires were then used to compute results using frequencies, percentages and content analysis.

**Table 1: Population and Sample of the Study**

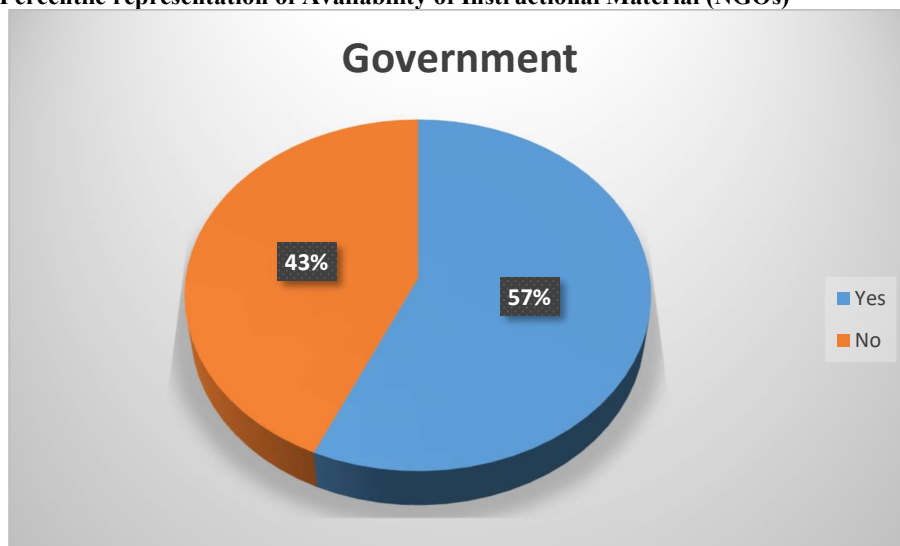
S/N	School	No. of Teachers	No. of Stu.	Sample Stu.	Sample Teachers
1	Fed Govt. Girls College Gwandu	15	1,095	278	14
2	Govt. Day Sec School Gwandu	10	810	260	10
3	Govt. Girls Sec School Gwandu	20	1,680	310	19
<b>Total</b>		<b>45</b>	<b>3,585</b>	<b>848</b>	<b>43</b>

**Results**

**Research Question 1:** To what extent are instructional materials available in teaching computer studies in secondary schools in Gwandu Metropolis of Kebbi State?



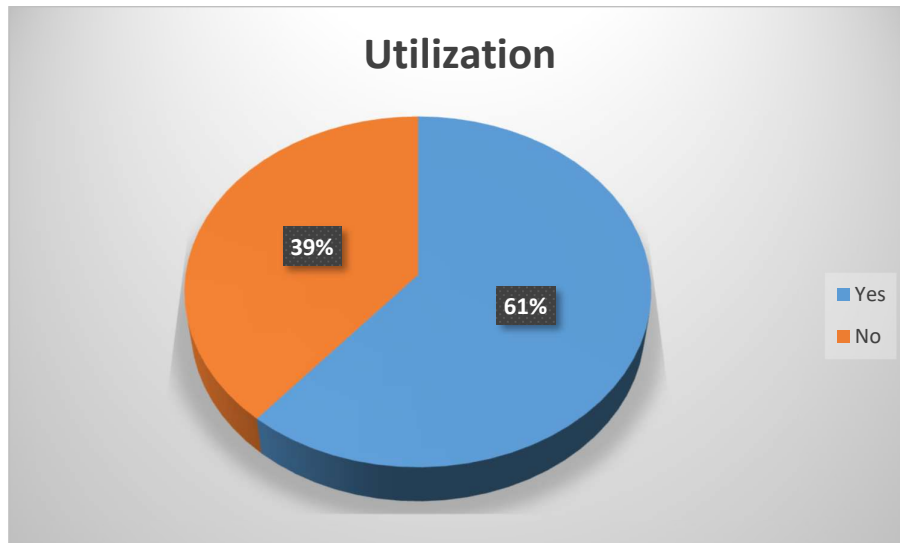
**Figure 1: Percentile representation of Availability of Instructional Material (NGOs)**



**Figure 2: Percentile representation of Availability of Instructional Material (Govt')**

Figure 1 showed that 42.2 % of the respondents observed non-governmental organizations provided instructional materials to their school and 57.8 % of the respondents are of the view that non-governmental organizations did not provide instructional materials to their schools. Figure 2 showed that 56.7 % of the respondents agreed that government is responsible for the provision of instructional materials to their school while 43.3 % of the respondents are of the view that government did not provide instructional materials to their schools.

**Research Question Two:** How effectively are instructional materials been utilized by the teachers?



**Figure 3: Effective use of Instructional Materials by the Teachers**

Observation on Figure 3 showed that 61.1 % of the respondents are of the view that teachers utilizes the available instructional materials in their teaching 38.9 % of the respondents are of the view that their teachers do not use the available instructional aids in teaching.

The in depth interview conducted for teachers was viewed from the perspectives of availability of instructional materials, types of instructional materials, provision of instructional materials and utilization of instructional materials. The observations made by the teachers in the sampled schools are explained below:

#### **Availability of Instructional Materials**

The availability of instructional materials across institutions of learning has been a major issue. This includes those provided by governments, agencies, non-governmental organizations or philanthropists. The dearth of instructional materials has occasionally been resolved in schools through improvisation. It should be noted that improvising computers for teaching and learning is somewhat impossible. Thus, across the schools studied, it was gathered that, though students enjoy being engaged in computer studies or lessons, the available gadgets are most at times not readily available or highly insufficient. A teacher of computer studies in one of schools observed that;

To teach computer studies in schools located in rural areas is almost impossible. This is because the computers and gadgets provided by the government are not enough. You would notice that for a class of 70-80 students, is only a computer to use for practical. (Teacher, Male, 37 Years, Rural Based)

This indicates that a teacher needs to group the class into 10s or 20s to teach a particular topic with a maximum of 12 to 13 weeks to teach the syllabus for the whole term. This however amounts to lack of coverage of the scheme of work and which in turn affects students' performance in terminal examinations.

#### **Types of Instructional Materials**

The materials readily available in the secondary schools are basically computers and its accessories. The teachers' saddled with the responsibilities of teaching the subject are affected by the unavoidable restriction of the types of instructional materials readily available. A staff in one of the schools observed that;

Studying computer science as a young undergraduate at the University was tasking and somewhat challenging but interesting. Today that I found myself teaching the course in the secondary school, although still interesting but with a lot of difficulties because of lack of variety in the gadgets to be used in teaching (Teacher, Female, 25 Years, Urban Based)

The teachers added that improvising a computer is somewhat not possible. So, a teacher is left with the option to describe what a computer is like. One of the closest examples a teacher could provide is to cite an example with an android phone were the privileged students grasp faster than those without an android phone either in their homes or among their closest allies, neighbours or extended family members.

### **Provision of Instructional Materials**

Instructional materials are very vital in learning and the availability of the said materials has been a major issue in the secondary schools. Government as a body responsible for the provision of instructional materials seem overburdened and so, non-governmental organizations (NGOs) have taken over in some of the rural areas of the State as disclosed in one of the schools studied. They added that for the success of the subject and its stated objective to be attained, the schools management uses their Parents Teachers Association (PTA) and the Schools Based Management Boards (SBMC) to solicit support in the provision of computers and other gadgets. A principal in one of the schools observed that in one of their meetings with the PTA and SBMC the school management had to open up to solicit for the provision of general instructional materials which included books, laboratory equipment, a school bus and so on. He maintained that;

Having a good understanding with a schools' resident community has helped in encouraging retention rates of students and an improved performance. A philanthropist supplied our school with ten sets of new desktop computers and twenty copies of manuals for the teaching of computer studies (Principal, Male, 57 Years, and Rural Based)

### **Utilization of Instructional Materials**

Acquiring and proper utilization of instructional materials is corroborated with unavailability and unprofessionalism of teachers. This trend could be traced to the sustained attitudes of some higher institutions of learning where the theoretical aspect of the course is given most priority. Road side business centres seem to offer a great deal of the practical aspect of the subject which makes it flourishing for the owners. A large number of students at undergraduate level manage to earn a degree certificate in computer science with an additional qualification from renowned computer schools or training institutes to boost their chances of being engaged in the labour market. However, the zeal and large dreams are suddenly shattered by the dearth in availability of instructional materials for those who engage in the teaching profession, thus, the poor utilization of the few available materials.

### **Discussion**

Findings suggest that Governments are the major body responsible for the provision of instructional aids in secondary schools. This finding is in agreement with Nbina in Muza (2020) who stated that schools through government should provide expensive textbooks and other materials that will facilitate teaching and learning. It was also found out that the instructional materials provided by the government are often not sufficient and leads to overcrowded classes during practical which in turn affects performance. Thus, as supported by Ogoh, (2018) education has continued to be important and this is why there has been a growing concern in recent years about the quality of education that is offered at all levels of education in Nigeria especially secondary education level.

On findings regarding the types of instructional materials, it found out that only computers are readily available. This does not corroborate with the standards outlined by NAPTEA (2013); types of computer based instructional materials available across the globe include; graphic materials – charts, graphs, posters, diagrams, cartoons, comics, maps and globes; 3-D materials, still pictures, still projected and motion pictures .It was also found that teachers of computer studies utilize the available instructional materials. However, the use of these instructional materials did not influence the learning and teaching process and this might be attributed to fewer instructional materials and poor use of the materials by un-professional computer studies teachers.

The findings indicate that the respondents are of the view that majority of the teachers utilize the available instructional materials in their teaching while only a few respondents are of the view that teachers do not use the available instructional aids in teaching. Abdu-Raheem (2014), acknowledged that instructional materials are used by teachers to aid explanations and make learning of subject matter understandable to students during teaching and learning process. Instructional materials are essential and significant tools needed for teaching and learning to promote teacher's efficiency and capture the student's attention in classroom situation. Also in agreement, Agbulu and Wever (2011), maintained that instructional materials are important because they are used for the



transference of information from one individual to another, help the teacher in extending his learner's horizon of experience, stimulate learners' interest and help both teachers and students to overcome physical limitations during the presentation of subject matter, among others. Emphasizing on the importance of the utilization of instructional materials, Yazid *et. al.* (2020) stated that instructional materials make teaching and learning more meaningful, understandable and easy. But in spite of the benefits of instructional materials to teaching and learning, the scarcity and inadequate utilization of the instructional materials has hindered, to some extent, the efficiency of teaching and learning.

### Recommendations

This study investigated the availability and utilization of instructional materials in teaching computer studies. Based on findings from study, it is recommended that; Government at all levels; Local, State and Federal join hands together to enact policies or laws to encourage;

- i. Only professionally trained computer science teachers, teach computer studies in secondary schools
- ii. Routine maintenance for the instructional materials provided
- iii. Training of teachers on the need for improvisation and in addition procure new materials after a period of ten (10) years
- iv. Availability and proper utilization of instructional materials provided in secondary schools.

### Conclusion

In view of the findings the study concludes on the investigation on availability and utilization of instructional materials in teaching computer studies. Result has demonstrated that the respondents indicated that there are inadequate professional teachers; inadequate instructional materials in some schools. However it is evident in the literature that there are other ways to improve the effectiveness of teaching Computer Studies.

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