



Availability and Utilization of Instructional Materials for Effective Teaching and learning in Public secondary Schools in Kano State

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Abstract

This study examined the availability and utilization of instructional materials for effective teaching and learning in Public Secondary Schools in Kano State. The study adopted the descriptive research survey design. In order to achieve this purpose, two (2) research questions and two (2) hypotheses were postulated. The population of the study was 2,651 teachers drawn from the 36 Public Secondary Schools in Kano State. The sample size was 530 teachers which is 20% of the total population using the simple random sampling technique. The research instrument was a self-designed questionnaire titled "Availability and Utilization of Instructional Materials for effective Teaching and learning". The Questionnaire comprised of two sections; Section A and Section B respectively. Section A elicits information on the personal data of the respondents, while Section B had items aimed at providing relevant information in respect to the research questions. The questionnaire items were designed on a four-point Likert rating scale. The instrument was validated by the experts in research and tested for reliability using Pearson Product Moment Correlation coefficient. A reliability coefficient of 0.79 was obtained. The study revealed that visual instructional materials are available for effective teaching in Public Junior Secondary School in Kano Metropolis. Also, the study further revealed that visual instructional materials are utilized to a High Extent (HE) for effective teaching in Public Junior Secondary School in Kano Metropolis. It was recommended among others that there should be provision of visual instructional materials in all the Public Junior Secondary Schools in Kano Metropolis of Kano State. This will enhance effective teaching and learning.

Keywords: Availability, Utilization, Instructional Materials, Teaching and learning

INTRODUCTION

Pursuance of education is one of the most valuable achievements that a person can attain in life. Education is the key to all human developments and strives to raise the standard of intelligence efficiency, understanding patriotic favor, and nationalistic spirits for social preposition and financial development. It is the root of a cultured and civilized society of national significance. Education is an indispensable component in the development of any nation.

As a result, many countries in the world view education as a good investment for national development. This is because it ensures that the needs and aspirations of individuals are met. This means that education can only provide and meet the needs of the individual and society when it is taught with the right materials. The idea of using materials and equipment to enhance effectiveness in the instructional process is as old as mankind. The wise teacher will always use tools or aids in form of instructional materials to help the learners understand and learn better. The unavailability of instructional materials for effective teaching in Public Junior Secondary Schools and the little or no use of the available ones have been perceived to have impacted negatively on the performance of students at the secondary level (Anyanwu, 2003).

In recent years, there have been discussions and debates on the falling standard of education. The blame has always been on teachers, parents and students. In spite of the contributions of teachers, parents and even the students towards the failing standard of education in Nigeria, research have also found that lack of availability and utilization of instructional materials is also a potent factor. Instructional materials are devices used by teachers to enhance teaching and learning in school.

Abdu-Raheem (2016) defined instructional materials as essential and significant tools needed for teaching and learning of school subjects to promote teachers' efficiency and improve students' performance. Instructional materials, however, do not achieve any of the attributed values on their own. Their usefulness depends on what the teacher makes out of them. This infers that intelligent handling of these materials in the classroom is necessary. For effective utilization of instructional materials, teachers must understand how to use and control instructional materials. It is mandatory for the classroom teacher that uses these devices to direct the attention of students to focus on the application of the instructional materials for lesson delivery.

Over the years, the poor performance of students in public examinations has been blamed on the wrong choice of non-utilization of instructional materials by teachers (Coomb, 2006). Nevertheless, teaching and learning activities have a lot to do with other variables, such as the use of instructional materials; teacher's qualification; school environment variables; students' factors among others. The importance of instructional materials in any teaching/learning process cannot be over emphasized. This is because such materials enhance, facilitate and make the teaching/learning process easy, lively and concrete. Instructional materials or teaching aids are indispensable education tools for enhanced teaching and learning process, as they make classroom activities practical, real, motivating and attractive for both teachers and pupils. This in effect may translate to enhanced pupils' academic achievement, as it results to active and effective participation in the classroom for both learners and instructors. On this note, Tuimur and Chemwei (2015) perceived instructional materials as tools and provisions utilized by teachers in the classrooms to make abstract concepts real and make teaching and learning pleasurable, attractive and stimulating. Similarly, Jonavsky and Brooks (2021)

conceptualized instructional materials as any form of apparatus employed by the teacher for orderly and logical presentation of classroom lessons to learners. Earlier, Amadioha (2009) pointed out that instructional materials offer varied ways of presenting a concept to learners. In a similar study, Muraina (2015) pointed out that absence and non-utilization of instructional materials is the first reason for poor academic achievement of students in secondary schools.

Instructional materials are essential for enhancing teaching and learning because they provide means of widening students' learning experience, expose students to a wide range of learning activities, increase the efficiency of the teacher by providing tutorials and response guidance for individual students and small groups. They also facilitate increased interest in learning; hold learners' attention; provide opportunities of interacting with the social and physical environment (e.g. during excursions/field trips) and promote knowledge gathering (NTI Manstal, 2006).

Mangel (2009) viewed instructional materials as helping the teachers to communicate effectively with students in order to achieve the desired objectives where ordinary words or verbalization have been found to be inadequate for effective teaching. Thus, it serves as a channel through which message, ideas and information are disseminated more easily. Education that hopes to promote the quality of students in schools with a global outlook must be enhanced with the aim of achieving pre-determined educational goals that characterize the 21st century. The Federal Republic of Nigeria in her National Policy of Education (FRN, 2013) also emphasized on making learning experiences more meaningful and realistic for children by advocating for the development and promotion of effective use of innovative materials in schools. This implies that government is also aware that instructional materials ensure better retention, stimulate and motivate students to learn. Thus, it encourages participation especially if students are allowed to manipulate materials used.

Instructional materials have been categorized by several authors base on certain classifications. For Ibe (2000), instructional materials are classified based on the sense. In audio instructional materials, learners learn from them by listening, whereas in audio-visual instruction materials, learners learn from them when the stimulus of sight and hearing are present to them simultaneously. The Audiovisual aids include overhead projectors, smart boards and multimedia projectors while the audio aids comprise of the radio, tape recorders and son on. The visual materials are the textbooks, chalkboards, charts, flannel boards, maps, pictures, models and practical demonstrations.

The use of instructional materials is necessary in Public Junior Secondary Schools as inevitably, as it is perceived that students in Public Junior Secondary Schools sometimes find it difficult to comprehend immediately what is being taught by the teacher due to non-availability of instructional materials to convey the concept and topics taught to the learners. This may have affected the grades of students in Public Junior Secondary Schools (Emmana, 2004). Most of them have not been able to achieve academic success in both internal and external examinations because of perceived inadequate supply or availability of instructional materials in the public Junior Secondary Schools. It is imperative that to assert that availability of instructional materials in Public Junior Secondary Schools cannot be effective without proper utilization. This means that utilization of available materials for instruction is necessary.

Hornby (2004) informatively explained that utilization is the process whereby use is made of available services at the individual's

disposal, to derive maximum benefit or stated objective through available materials. These instructional materials or resources include the tools, textbooks, visual aids, audio aids, mock-up, and improvised materials and so on. Olagunju and Abiona (2008) also stated that resource utilization is the process whereby instructional materials is systematically managed and organized, towards meeting the end goal. It was further added that in a school, teaching materials that are available should be utilized such that it enables the students to acquire desirable learning competencies. Utilization of standard instructional materials in teaching had been known to be fruitful learning since it stimulates student's senses and motivates them. Ekenedo (2014) pointed out that there is a relationship between knowledge of a skill and the actual utilization of such knowledge even when it comes to teaching and learning in Public Junior Secondary School. Utilization has been further described as the actual patronage of the education facilities, equipment and supplies by the education teacher in teaching the secondary school biology.

The successful implementation of any academic programme greatly depends on the availability and utilization of resources; therefore, their presence is good predictors of a well facilitated and effective programme. In this regard, Offorma (2002), disclosed that teaching is usually facilitated, and it is more effective when there is active participation of the learners and utilization of appropriate teaching materials. The active participation of the learner is facilitated by the availability and effective utilization of instructional materials for effective teaching in Public Junior Secondary Schools in Kano State. It is against this background that the researcher hopes to find out the extent of availability and utilization of instructional materials for effective teaching in public junior secondary schools in Kano Metropolis, Kano State.

Statement of the Problem

Students' poor academic performances have become a very serious concern to all stakeholders. Education stakeholders blame the teachers while the teachers on their part blame the government for failing in their responsibilities to provide adequate instructional materials to enhance students' academic performance in Public Junior Secondary Schools (Adedeji, 2002). It is also perceived that although these instructional materials are lacking in most Public Junior Secondary Schools, their utility by teachers has also been questionable.

This is in variance with the National Policy on Education (FRN, 2013), where it is was categorically stated that learning experiences for children shall be made more meaningful with the provision and effective use of innovative materials in schools. These innovative materials are the broad-based instructional materials needed for teaching-learning process in the Public Junior Secondary Schools. It is against this background that the researcher hopes to assess the availability and utilization of instructional materials for effective teaching in Public Junior secondary Schools in Kano Metropolis, Kano State.

Purpose of the Study

Generally, the study aimed at ascertaining the availability and utilization of instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State. Specifically, study was to:

1. Examine the extent of availability of visual instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State

2. Ascertain the extent of availability of audio instructional materials for effective teaching in Public Junior Secondary Schools in Kano, Metropolis, Kano State.

Research Questions

The following research questions guided the study:

1. To what extent are visual instructional materials available for effective teaching in Public Junior Secondary Schools in Kano, Metropolis of Kano State?
2. To what extent are Audio Instructional Materials available for effective teaching in Public Junior Secondary Schools in Kano Metropolis of Kano State?

Hypotheses

The study was guided by the following null hypotheses at 0.05 level of significance.

1. There is no significant difference in the mean ratings of teachers from Dala Local Government Area and Nasarawa Local Government Area on the extent of available visual instructional materials for effective teaching in Public Junior Secondary Schools in Port Harcourt Metropolis, Rivers State.
2. There is no significant difference in the mean ratings of teachers from Dala Local Government Area and Nasarawa Local Government Area on the extent of available audio instructional materials for effective teaching in Public Junior Secondary Schools in Port Harcourt Metropolis, Rivers State.

METHODOLOGY

The study adopted the descriptive research survey design. The population of the study consists of male and female teachers of Public Junior Secondary School in Kano, Kano State, which is 845 teachers. Simple random sampling technique was used to select a sample size of 530 teachers in the 44 Local Government Areas, that makes up the Dala Local Government Area and Nasarawa Local Government Area. Data for the study were collected with a self-constructed instrument titled "Availability and Utilization of Instructional Materials for Efficient Teaching Questionnaire (AUIMETQ) which was design after Likert 4 point rating scale. The instrument was validated by two experts in educational management from Rivers State University. A reliability of 0.080 was established the instrument through Pearson Product Moment Correlation (PPMC). For the analysis of the data, research questions were answered with mean and standard deviation while hypotheses were tested with z-test. Mean values less than 2.50 was regarded as agreed while an item with a mean value below 2.50 was regarded as disagreed.

RESULT AND DISCUSSION OF FINDINGS

Results from the study were presented in the table below;

Research Question 1:

To what extent are visual instructional materials available for effective teaching in Public Junior Secondary Schools in Dala, Metropolis, Kano State?

Table 1: Mean Score of Respondent on the Availability of Visual Instructional Materials for Effective Teaching and Learning in Public Junior Secondary Schools in Kano metropolis, Kano State.

S/N	Items Statement	PHALGA (N ₁ =133)			OBIO/AKPOR(N ₂ =322)		
		M	S.D	Decision	M	S.D	Decision
1.	Pictures	2.60	0.94	HE	2.51	0.92	HE
2.	Diagrams	2.51	0.82	HE	2.37	0.91	LE
3.	Chart as a visual	2.71	0.91	HE	2.56	0.93	HE
4.	Projectors	2.72	0.90	HE	2.58	0.92	HE
5.	Real Objects	2.59	0.75	HE	2.56	0.74	HE
6.	Chalk/whiteboard	2.47	0.94	LE	2.46	0.98	LE
	Average Mean/SD	2.60	0.88	HE	2.51	0.90	HE

Source: Field Survey 2018

Result from Table 1 shows that visual instructional materials are available for effective teaching in Public Junior Secondary School in Kano Metropolis as shown in the response of the teachers from PHALGA and OBALGA with an average mean of 2.60 and 2.51 with a standard deviation of 0.88 and 0.90 respectively. This implies that visual instructional materials were available to a High Extent (HE) in Public Junior Secondary Schools in Kano Metropolis. The standard deviation values between 0.00 and 0.99 indicate that the

respondents were close in their responses while standard deviation values between 1.00 and above implies that the respondents were far apart in their responses.

Research Question 2:

To what extent are Audio Instructional Materials available for effective teaching in Public Junior Secondary Schools in Kano, Metropolis, Kano State?

Table 2: Mean Score of Respondent on Audio Instructional Materials Available for Effective Teaching in Public Junior Secondary Schools in Kano, Metropolis, Kano State.

S/N	Items Statement	PHALGA (N ₁ =133)			OBIO/AKPOR(N ₂ =322)		
		M	S.D	Decision	M	S.D	Decision
7.	Tape recorder	2.35	0.94	LE	2.16	0.93	LE
8.	Cassette	2.76	0.74	HE	2.68	0.78	HE
9.	Radio	2.61	0.84	HE	2.50	0.83	HE
10.	Teleconferencing	2.70	0.97	HE	2.55	0.97	HE
11.	Language Laboratories	2.60	0.74	HE	2.57	0.74	HE
12.	Science Laboratory	2.80	0.86	HE	2.62	0.90	HE
	Average Mean/SD	2.64	0.85	HE	2.51	0.86	HE

Source: Field Survey 2018

Result from Table 2 shows that audio instructional materials are available for effective teaching in Public Junior Secondary School in Kano Metropolis as shown in the response of the teachers from PHALGA and OBALGA with an average mean of 2.64 and 2.51 with a standard deviation of 0.85 and 0.86 respectively. This implies that audio instructional materials were available to a High Extent (HE) in Public Junior Secondary Schools in Kano Metropolis. The standard deviation values between 0.00 and 0.99 indicate that the respondents were close in their responses while standard deviation values between 1.00 and above implies that the respondents were far apart in their responses.

Statistical Test of Hypotheses

The study was guided by the following null hypotheses at 0.05 level of significance.

Hypothesis 1: There is no significant difference in the mean ratings of teachers from Dala Local Government Area and Nasarawa Local Government Area on the extent of available visual instructional

materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Rivers State.

Table 3: z-Test Analysis on Availability of Visual Instructional Materials

Groups	N	Mean	SD	df	zcal	Zcrit	Decision
PHALGA	133	2.60	0.88	453	0.98	1.960	Accepted
OBALGA	322	2.51	0.90				

Source: Researcher's Field Result, 2019 Accept Ho if zcal<zcrit; Otherwise Reject.

The result in Table 3 revealed that there is no significant difference in the mean ratings of teachers from Dala Local Government Area and Nasarawa Local Government Area on the extent of available visual instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State. Since the

calculated value of z (0.98) is less than the critical value of z (1.960), the null hypothesis of no significant difference was accepted. Hence, the alternate hypothesis was rejected. This implies that there is no significant difference in the mean ratings of teachers from Dala Local Government Area and Nasarawa Local Government Area on the extent of available visual instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State.

Hypothesis 2: There is no significant difference in the mean ratings of teachers from Dala Local Government Area and Nasarawa Local Government Area on the extent of available audio instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State.

Table 4: z-Test Analysis on Availability of Audio Instructional Materials

Groups	N	Mean	SD	df	Zcal	zcrit	Decision
PHALGA	133	2.64	0.85	453	1.47	1.960	Accepted
OBALGA	322	2.51	0.86				

Source: *Researcher's Field Result, 2019* Accept H_0 if $z_{cal} < z_{crit}$; Otherwise Reject.

The result in Table 4 revealed that there is no significant difference in the mean ratings of teachers from Dala Local Government Area and Nasarawa Local Government Area on the extent of available audio instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State. Since the calculated value of z (1.47) is less than the critical value of z (1.960), the null hypothesis of no significant difference was accepted. Hence, the alternate hypothesis was rejected. This implies that there is no significant difference in the mean ratings of teachers from Dala Local Government Area and Nasarawa Local Government Area on the extent of available audio instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State.

DISCUSSION OF FINDINGS

Result from Table 1 above shows the mean score rating of respondent on the utilization of visual instructional materials for effective teaching in Public Junior Secondary Schools in, Kano Metropolis, Kano State.

The result showed that the respondents agreed all the questionnaire items on visual instructional materials utilized for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State as the mean score rating of the teachers were > 2.50 . The findings of this study is in corroboration with the opinion of Ibe (2000) who classified this type of instructional material according to the sensory stimulus models that a learner may be exposed to learn. In visual instructional materials, learners learn only through the visual sensory modality. In audio instructional materials, learners learn from them by listening, whereas in audio-visual instruction materials, learners learn from them when the stimulus of sight and hearing are present to them simultaneously. In tandem with this finding, Erickson (1969) suggested that instructional materials are those media materials used, to facilitate teaching and learning process. Jerkins, (1981) stressed that instruction materials are those media materials which cause better understanding, capture of more authentic information with better views of images and general sharpening of intelligence.

Result of Table 2 revealed that audio instructional materials are available in Public Junior Secondary Schools in Kano Metropolis for utilization to enhance effective teaching. This is shown in the mean scores of the teachers from both PHALGA and OBALGA. This result uphold that of According Akaniwor (1985), who discovered that modern technology has provided equipment, which combines instructional materials, and popular research has shown that this equipment are better suited to learns than anything else. Learners understand more when they see and hear about them simultaneously. Furthermore, he was of the view that video or television system is one of the most effective techniques a teacher can use to capture the attention of his or her students considerably.

CONCLUSION

From the results of the study, the following conclusions were made:

There is no significant difference between the mean ratings of Dala Local Government Area and Nasarawa Local Government Area teachers on the availability and utilization of visual instructional materials for effective teaching in Public Junior Secondary Schools in Kano,

Metropolis, Kano State was accepted. There is no significant difference between the mean ratings of Kano Local Government Area and Nasarawa Local Government Area teachers on the availability and utilization of audio instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State. There is a significant influence of Dala Local Government Area and Nasarawa Local Government Area teachers on the availability and utilization of audio-visual instructional materials for effective teaching in Public Junior Secondary Schools in Kano Metropolis, Kano State.

RECOMMENDATIONS

In view of the Place of Instructional Materials for Effective Teaching in Public Junior Secondary School, the following recommendation were made;

1. The Government, public spirited individuals, nongovernmental organizations, and companies should assist the schools through funding, donations and provision of instructional materials.
2. Since instructional materials facilitate teaching outcomes, the government at all levels, should establish more educational Resource centers and information communication technology centers.

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