



Organising of Instructional Materials and Students' Academic Achievement in Senior Secondary Schools in Adamawa State

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Abstract: *This study investigated the organising of instructional materials and students' academic achievement in senior secondary schools in Adamawa state. The purpose of this study was to determine the organising of schools facilities and students' academic achievement in senior secondary schools in Adamawa state, one hypothesis guided the study. The study adopted descriptive survey design; the area of the study was Adamawa state. The population of the study comprised 337 principals and 5128 teachers and 134,346 in all the senior secondary schools within the five education zones of Adamawa State. The sample size of 166 principals, 365 teachers and 531 senior secondary school students which were statistically determined using Taro Yamane formula for finite population. The instrument was questionnaire named "organising of instructional materials questionnaire" (PMSFQ) designed by the researcher and pro forma to elicit students' academic achievement. The instruments were validated by 4 validators. The reliability coefficient of 0.82 was obtained using cronbach's alpha method. The null hypothesis was answered using linear regression analysis. The hypothesis tested at 0.05 level of significance was rejected. In conclusion it was reveal that organising of schools facilities have contributed to students' academic achievement in senior secondary schools of Adamawa state. Among the recommendations, instructional materials should be provided to enable students' and teachers to concentrate on their job for effective delivery.*

Keywords: *Principals' Management, School Facilities, Students' Academic Achievement.*

INTRODUCTION

Ogie (2015) describes instructional materials as those resources employed to facilitate effective teaching learning process". They are used to provide the richest possible teaching learning interaction between the teacher and the learner by promoting effective communication process. The researcher defines instructional materials as instructional media used for instructional purposes. They include audio media, visual media, Audio- visual Media, etc. These media when properly utilized bring about effective learning, which consequently results to better academic achievement. Non-availability or non-utilization of instructional materials results to non-fulfillment or non-realization of the objectives of teaching- learning situation. So, the importance of taxonomy of instructional media cannot be treated with a wave of hands. Audio Media: The teaching devices that appeal to auditory senses are referred to as audio media. These comprise radio programmes, tapes (cassettes and disc records) phonographs and wire recorders (telephone and walkie-talkie). These audio media when effectively used enhance learning.

However, Audio media should not be used in a class where some students are auditory impaired. Students' attention should be turned to important programmes in the radio. By listening to such programmes, the students learn the personalities and thoughts of famous and important people and are given a background for

the understanding of certain events in the world and learn to clear certain controversial issues. The students also learn to broaden their knowledge and to even be in a better position to choose the right vocations. Furthermore, when some class activities are recorded, they enable each learner to listen to his or her own voice and this can invariably help the learner to improve both in his knowledge and speech. In support, Yusuf (2008) adds that recording the voice and speaking habits of each learner is becoming a common practice as a means improving speech. The effect on a learner of listening to his own voice is a greater motivator towards improvement than a teacher's attempt to convince him that he has certain speech difficulties. So audio media enhance learning. Visual media: Visual Media include graphs, charts, diagrams, maps, photographs, pictures, filmstrips, cartoons, opaque projectors, slides, specimens, models, stereographic materials and transparencies. All these appeal to visual senses. These media can be very helpful to a skillful teacher.

Most of these media are easy to use, clear and impressive in their presentation and more importantly inexpensive. These media when effectively utilized ensure better learning and better academic achievement pictures, photographs, posters and cartoons, project the real image of what is taught and help the learner to understand and register what is taught. Adeyemi (2009) state that "when the picture is made visible to all members of the class, it can become an excellent teaching device. The teacher should use pictures to supplement text book illustrations, since it is impossible to include in a textbook all the pictures that should be shown to a class" Most often the teacher assembles his own collection of pictures, posters, cartoons and photographs. At times, the teacher can make it a class project, in which cases he requires the students to produce and assemble a collection of pictures, posters, cartoon's and photographs. These help to clarify ideas. In addition, maps, globes, charts, graphs and diagrams can be effective in the orientation of students to locations of cities, countries, continents of the world, height of mountains, etc. The teacher as well can make quick drawings of maps, on the chalk board to clarify his points. The study of maps and globes enables the students to understand what is going on in the different parts of the world. The teacher can prepare charts, diagrams or graphs on the chalkboards or on large sheets of cardboard paper to ensure easy and proper understanding.

Lawanson and Gede (2007) stated that charts, graphs and diagrams have value if they can be presented objectively and accurately, with a minimum of words of lines, so that ideas are gained quickly and correctly." Objects, specimens, and models like parts of machines and models of parts of the human body help to create an understanding that would be difficult to attain without the visual aid. Objects, specimens and models often help the students understand the lesson better. Effective utilization of visual medial ensures better learning and achievement. Audio-visual Aids: they also describe audio-visual Media as "instructional devices that have the capacity to provide the features of audio and visual media simultaneously. Audio-visual media include television, video-taped programmes/recordings, sound films, film- strips and slides with synchronized sound. All these when properly utilized enhance learning. Proper care should be taken by the teacher while using film as an instructional aid. The teacher should preview the film before he presents it, so as to become acquainted with its length, content and organization. The teacher should as well have the class discuss the film as soon as after its showing to ensure proper understanding. A film or video recording about a related literature or topic could be shown to students for prompt understanding. Television program is not so much in use in secondary schools. Some schools have televisions mainly for moral training and leisure.

Anikweze (2009) summarizes the purposes of instructional materials as follows:

1. Instructional media increase the rate of learning and at the same time allows the teacher to use more time on other gainful activities.
2. They affect a reality of experience that stimulates self-activity on the part of the learners.
3. They provide learning experiences, which are not within the immediate classroom environment.
4. They discourage rote learning by emphasizing realistic learning
5. Abstract terms and concepts could best be explained and illustrated through the use of instructional media.

6. They help the learner to focus his entire attention during teaching learning process. The use of instructional materials can compel learners to examine an object, operate a working model, use a computer and reflect on what he sees on the board screen, thus his attention is not only aroused but equally sustained.
7. They provide the teachers with the means of guiding and controlling the desirable responses of the learner in relation to stimulus materials of learning situation.
8. They help to develop awareness of problems, open up possibilities for exploration, present meaningful interaction, which naturally lead to provision of solutions.
9. They help to stimulate purposeful and vitalized self-activity, and this is much more profitable educationally than a more or less passive and often bored listening
10. Provision and use of instructional materials will improve classroom communication process between the teacher and the learners, with this, the expected improvement, in learning output will be accomplished.

Arikewuyo (2010) revealed that eighty five percent (850/0) of English. Language teachers agreed that inadequate teaching aids in schools contributed greatly to students' poor achievement in WASCE IGCE English. He adds that this is so because it is important for the teacher to use a wide variety of materials to provide satisfactory learning experiences for his pupils. that some schools indeed have some teaching facilities mostly unused, while others reported that "many of the schools in Nigeria apart from model schools and Federal Government Colleges, hardly have adequate material resources". In the light of these problems, the researcher should move forward to find the present condition of teaching aid in our schools and its utilization.

Statement of the Problem

There are serious negative consequences to students when instructional materials are not properly managed. In Adamawa state majority of the students in public senior secondary schools perform poorly in West African senior school certificate examinations (WASSCE). This situation makes it impossible for the attainment of the goals of national policy. All the above problems are as a result of poor achievement of students, which appears deep rooted in inadequacy or poor management of instructional materials inherent in the secondary schools today.

Equally true is that poor achievement and non-grasp of practical's in science courses had been attributed to debilitated facilities or near-absence of laboratory infrastructural facilities. Nwankwo (2007) opined that in many cases the laboratories do not exist or are in advanced stages of disrepair, resulting in the poor achievement of students in West African Examinations Council (WAEC), hence the resultant poor quality output from Nigerian secondary schools, especially the public schools. Okeke (2007) maintained that the quality of educational output to a large extent depends on the scale of equipment and facilities such as laboratory, workshops, libraries, books, and teaching aids and how best they are being put to use. It is therefore the purpose of this study to explore the extent to which effective management of instructional materials by the school principals affect the achievement of students and the teaching-learning outcomes generally.

Purpose of Study

The purpose of this study is to determine the organising of instructional materials and students' academic achievement in senior secondary schools in Adamawa state. The specific objectives are to determine the relationship between:

1. Organising of instructional materials and students' academic achievement.

Research Questions

The following research questions guided this study.

1. To what level are instructional materials organised for student academic achievement?

Research Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance.

H0₁: There is no significant relationship between the organisation of instructional materials and students' academic achievement.

Methology

The design of this study was descriptive survey research design. The target population of this study comprises of all the 337 principals, 5128 teachers' and 134,346 students' in all the senior secondary schools within the five education zones of the State. In this study, a stratified random sampling technique was used to sample two education zones out of the five zones which are Yola zone and Mubi zone. The sample size was **166** principals and **365** teachers' in the selected zones which was determined by Taro Yamane formula

The instrument used in this study was the Organisation of Instructional materials Questionnaire (PMSFQ). The instrument was constructed by the researcher to elicit responses relevant to the study from both the principals and teachers and a Pro forma design to collecting WASSCE students results from 2015-2017. The questionnaire was subjected to content validity. After the construction of the instrument, four validators in the field of Educational Management, Measurement and Evaluation in the Department of Science Education Modibbo Adama University of Technology, Yola validated the instrument.

In other to establish the reliability of the instrument, the items were pilot tested using 15 principals and 15 teachers' in 15 senior secondary schools in Ganye zone. These schools were chosen because they operate on the same standard and also have the same characteristics in the main study. The reliability of the instrument was obtained using Cronbach's Alpha method. A reliability coefficient of 0.82 was obtained which shows a high reliability.

The researcher and two research assistants (RAs) went to each of the selected schools and administer the questionnaire for principals and teachers'. The collection of the responses was after two weeks. In addition, the researcher went to selected senior secondary schools to collect and analyze WASSCE results of the randomly picked schools. The data collected was analyzed using mean and standard deviation to answer research questions; while the null hypotheses were tested using regression analysis.

Findings

Data Analysis and Presentation of Results

Research Question

To what level are instructional materials organised for student academic achievement in secondary schools of Adamawa state?

Table 1: Mean and Standard Deviation for the Level of Instructional materials Organised for Student Academic Achievement

	N	Mean	Std. Deviation	Remark
Classrooms	531	3.39	1.215	ME
Dormitories	531	2.82	1.451	ME
Library	531	3.34	1.510	ME
Laboratory buildings	531	2.64	1.505	ME
Staff rooms	531	2.58	1.284	ME
Teachers quarters	531	2.72	1.419	ME
Exams halls	531	3.40	1.385	ME
Audio visual materials	531	2.34	1.370	LE

Workshop equipment's	531	3.24	1.375	ME
Chalk boards	531	3.56	1.279	HE
GRAND MEAN	531	3.00		

The descriptive statistics in table 3 above shows the mean and standard deviation of responses to the instructional materials organised is moderate. The table indicates the result by the grand mean of 3.00.

Research Hypothesis

One hypothesis were formulated and tested at 0.05 level of significance using regression analysis.

H0₁: There is no significant relationship between the organisation of instructional materials and students' academic achievement.

Table 2: Linear Regression on Organizing of Instructional materials and Students Academic Achievement

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	26.549	1	26.549	.119	.042 ^b
	Residual	118262.867	530	223.559		
	Total	118289.416	531			
a. Dependent Variable: ACHIEVEMENT						
b. Predictors: (Constant), ORGANIZING						

Tale 2b: Model Summary of Linear Regression on Organizing of Instructional materials and Students Academic Achievement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.015 ^a	.122	.167	14.952
a. Predictors: (Constant), ORGANIZING				

The linear regression tables show that there is significant difference between the various R values, F = 0.119 (df 1, 530), P > 0.05. Since the computed p-value (0.04) is less than 0.05 level of significant, therefore the null hypothesis is rejected. This means that organizing of instructional materials has predictive ability on students' academic achievement in Adamawa state. Furthermore, the adjusted R-square value (0.167) indicates that, 16.7% of the students' academic achievement in this study was accounted by the organizing of school facilities.

Conclusion

On the basis of finding of the study it was concluded that organising of instructional materials contribute to secondary school students' academic achievement in senior secondary schools in Adamawa state.

Recommendations

Based on the outcome of the study, the following recommendations were made.

1. The government and school management should motivate principals to always organise instructional materials in a favourable way that teachers and students will benefit.

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