INSTRUCTIONAL MATERIALS PLANNING AND STUDENTS' ACADEMIC PERFORMANCE IN RURAL AND URBAN PUBLIC SECONDARY SCHOOLS IN OYO STATE, NIGERIA

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Abstract

This study examined both the contribution of and relationship between instructional materials and students' academic performance in rural and urban public secondary schools in Oyo State , Nigeria. Nine schools in Oyo State were randomly selected from rural and urban public schools, totaling 18 schools, ten teachers and ten students were selected from each of the sample schools. Hence, 90 students and 90 teachers from urban and 90 teachers and 90 students from rural formed the sample of 360 respondents. Student's proforma was used to collect students' Senior Certificate result for 2010/2011 session and instructional materials questionnaire tagged IMQ was administered. The study found the following: the predictor variable contributed significantly to the variance in the students' performance in

English Language and Mathematics but the contribution was very low. Further analysis indicated that instructional materials were potent in contributing to students' academic performance B=--.025, t=_.466, P<.01 and that there was positive significant difference between instructional materials and students' performance in rural and urban schools. Based on these findings, some recommendations were made.

Teaching is fundamentally concerned with transmitting skills and attitudes from the teacher to the learner. The popular method of conveying ideas to learners is through the spoken word. There is now realization that the use of words alone to communication ideas is grossly inadequate. Perhaps, as a result of the known deficiency, a wide variety of instructional materials are used to supplement the spoken word.

Dove (1975)cited in Adeogun (2001) claimed that knowledge is absorbed through the five sense assessed in the following proportions, sight 75%, hearing 13%, touch 6%, smell 3% and taste 3%. Walberg and Thomas (1972) reported that children learn best when they can actively explore an environment rich in materials, when they are given the choice about what is it to be learned, when they are able to interact informally with their teachers and with one another.

Fuller (1986) reported that the results of several studies conducted in developing countries have supported the educational value of the availability of textbooks and reading materials, the size, quantity of the library and the quality of the school buildings.

Instructional resources are those things, equipment and materials used in the process of instruction to supplement or complement the teachers' tasks. It can also be described as tools through which an instructional message passes from the teacher to the students. Such resources are used effectively if they enhance classroom interactions so that students receive the message with good understanding and skill to answer the teachers questions based on the lesson communicated.

Research findings in human learning also provide the rationale for the use of instructional materials. Brunner (1966) cited in Adeogun (2001) argues that all learning proceed from direct experience, from the iconic to the symbolic. Iconic experiences are presented through the use of still pictures, motion pictures or television.

Dale (1975) argues that instruction proceeds from the enactive to the iconic and then the abstract. In the enactive experience, dramatization, demonstration and concrete objects are used. From this iconic experience media materials such as TV, motion pictures and tape recordings are used. The last stage in the hierarchy of learning experiences is the abstract in which verbal symbols are used. These are often difficult to understand for some students, subjects such as Mathematics and English Language are

often in this category. Instructional materials are quite often used to simplify and clarify such concepts.

The abstract concepts may be reduced to concrete materials in order to enhance understanding.

As an illustration, the logistics involved in landing man on the moon were complex, yet if and when the various stages were presented as a motion picture, even the uninformed on lookers could make sense out of the presentation.

The importance of thorough schooling in national development cannot be over emphasized, especially in the present world of science and technology. In Nigeria, the belief in the efficacy of school-education has resulted in government increasing commitment to the establishment of school and expansion of school enrolment at all levels of the nation's educational system.

In spite of government huge financial outlays on education, especially senior secondary education, many public secondary schools lack adequate teaching aids (World Bank, 1997)

Secondary School students' achievement greatly depend on the availability and proper utilization of instructional materials. It is observed that instructional materials in our public secondary schools in Oyo State are grossly inadequate inspite of the immense benefits of such materials to users.. There is therefore, the need to address this in secondary education programme.

The Problem

Before and during the period of this study, Classroom were observed to be overcrowded with students. Instructional materials appeared not to be adequate. The state of students' academic performance has been a great concern to stakeholders in education as the results of most graduates are not encouraging and this has been linked to the inadequate instructional materials. Most instructional facilities are obsolete and not relevant for the modern day teaching and learning process. The status of instructional materials in Nigerian public secondary schools today appears to be of great concern to educators. Observations have shown that instructional materials are not adequate. The focus of this study is to investigate the relationship between instructional materials and students' academic performance in Public Secondary Schools in Ibadan metropolis and also how instructional materials contributed to students' academic performance.

Purpose of the Study

The purpose of this study is to determine the effects of instructional materials on students' academic achievement and to find out if there is any difference in the performance of students' from rural and urban vis-à-vis instructional materials and suggest ways of how adequate instructional materials can be provided and effectively utilized.

Research Hypotheses

The following research hypotheses were formulated and tested to guide this study.

Ho1: There is no significant contribution of instructional materials to students' academic achievement.

Ho2: There is no significant contribution of instructional materials to students' academic achievement in rural areas.

Ho3: There is no significant contribution of instructional materials to students' academic achievement in urban areas.

Ho4: There is no significant difference between instructional materials in rural and urban located public secondary schools.

Methodology

A descriptive survey research design was adopted for this study. The method is considered appropriate for the study because a survey research enables information to be obtained from representative sample of a target population to describe situation.

Sample and Sampling Techniques

Stratified and simple random sampling techniques employed in obtaining sample for this study. The population of this study consists of all the teachers and students' in Oyo State, Nigeria. Eleven local government were selected out of 33 local government in Oyo State. The eleven local governments selected consists of 6 in rural areas and 5 in urban areas in Ibadan metropolis. Nine schools were randomly selected each from urban and rural areas. Ten teachers and ten students were selected from each of the sampled schools. Hence, 90 teachers and 90 students totaling 180 respondents from each of rural and urban areas were selected. The sample consists of 360 respondents.

Research Instrument

The instrument used for collecting data for the study is the questionnaire. The instrument was tagged Instructional Materials Questionnaire (IMQ). The instrument has two sections, section A and B. The questionnaire was administered on both teachers and students. A proforma was used to collect students' academic performance that is WAEC results in English Language and Mathematics for 2010/2011 session. The questionnaire used was scrutinized and modified by experts. The reliability of the instrument was ascertained by using test-retest reliability method with a reliability coefficient of 0.81 was obtained.

Data Analysis

The data collected were analyzed using simple regression analysis, t-test and ANOVA.Hypothesis 1,2, and 3 were tested with Simple Regression Analysis, ANOVA , mean and standard deviation, while hypothesis 4 was tested with t-test.

Results

Hypothesis 1: There is no significant contribution of instructional materials to students' performance in Senior School Certificate Examination in English Language and Mathematics.

Table 1: Contribution of Instructional Materials to Students' Achievement Scores

Model	Unstandardized coefficient		Standardized coefficient beta	T	Sig
	B	Standard error			
Constant	764.669	103.056		7.420	.000
Instructional materials textbooks, charts, pictures and maps	-23.105	49.602	-.025	-.466	.642

Model Summary   R=.25, R2=.001, F(I,359)=.217., P<.01

The result in table 1 revealed significant outcome F=.217, P,0.05) This means that predictor variable, instructional material contributed significantly to the variance in the students' achievement scores in English Language and Mathematics but the contribution was low. As a result, the null hypothesis, one cannot be retained. Further analysis indicated that instructional materials is potent in contributing to students academic achievement β.025, t-- .466, P<.01 (through negatively). In effect, instructional materials will negatively influence students' academic achievement.

Hypothesis 2: There was no significant contribution of instructional materials to students' academic performance in Senior School Certificate Examination in English and Mathematics in rural areas.

Table 2: Contributions of Instructional Materials to Students' Performance Scores in Rural Areas

Model	Unstandardized coefficient		Standardized coefficient beta	T	Sig
	B	Standard error			
Constant	633.700	109.099		5.809	.000
Instructional materials textbooks, charts, pictures and maps	-21.516	56.297	-.029	-.382	.703

Model summary R= .029; R= .001; F (I,179) = .146 ; P< .01

The result in table 2 revealed significant outcome (F= . 146; P< 0.05) This implies that instructional materials contributed significantly to variance in the students' performance scores in school Certificate Examinations in English Language and Mathematics in rural areas, but the contribution was very low.

Further analysis indicated that instructional materials were not strong enough in predicting students' academic performance (B= --029, . t=--.382; P> .05.)

Hypothesis 3: There is no significant contribution of instructional materials to students performance in Senior School Certificate Examination in English and Mathematics in Urban areas.

Table 3: Contribution of instructional materials to students' performance scores in Urban areas

Model	Unstandardized coefficient		Standardized coefficient beta	T	Sig
	B	Standard error			
Constant	202.849	35.701		5.682	.000
Instructional materials textbooks, charts, pictures and maps	-5.317	16.165	-.025	-.329	.743

Model Summary: R= .025; R = .001; F(1,179)= .108 ; P> .05.

The result in table 3 revealed significant outcome. (F= .108; P .05) This implies that instructional materials contributed significantly to variance in the students' performance scores in school certificate examination in English Language and Mathematics in urban areas but the contribution was very low. As a result the hypothesis three was rejected. Thus, there was low but significant contribution of instructional materials to students' performance scores materials to students performance scores in SSCE in English Language and Mathematics in Urban areas. Further analysis indicated that instructional materials were not strong enough in predicting students academic performance (B= --.025; t= --.329; P> .05)

Hypothesis 4: There was no significant difference between the instructional materials and students' achievement in Rural and Urban public schools in Oyo State.

Table 4: summary for t-test of the Difference between Instructional Materials and Achievement in Rural and Urban Public Secondary Schools in Oyo State

Location	N	Mean	Standard deviation	T calculated	t-value	df	Sig
Rural	180	721.67	869.442	7.934	1.96	358	.000
Urban	180	192.33	212.643	7.934	1.96		.000

t- table calculated 7.934 df 358, P< 0.05 and t value is 1.96.

Table 4 shows the differences in the academic achievement of students in both rural and urban public secondary schools. The table shows that rural public schools performed better than urban public schools in English Language and Mathematics . The table revealed a positive significant difference between the instructional materials in rural and urban public schools in English Language and Mathematics being 721.67 and 192.33 respectively. The t-test calculated is 7.934 greater than table value of 1.96. Therefore, hypothesis 4 should be rejected. That is, there was significant difference between the instructional materials and students academic achievement in rural and urban schools.

Discussion

The study discovered through negative relationship between instructional materials and academic performance. Schools endowed with more instructional materials performed better than schools less endowed. This confirmed the previous study conducted by Babayomi (1999) that rural schools performed better than urban public schools because of availability and adequacy of instructional materials. The study also discovered a low level of instructional materials available in public schools in Nigeria which support the view that the Nigerian school system has been starved of human and material resources over the years and the situation continued to deteriorate in recent years (Ajayi 1998, Babayomi, 1999)

It was discovered that the mean performance of students in rural schools was higher than urban counterpart. This result is in agreement with the findings of Olutola (1981) and Babayomi 1999 cited in Adeogun (2001)

Conclusion

This study has confirmed that there was significant difference between the instructional materials in rural and urban public secondary schools. The findings of this study revealed a positive significant difference between the instructional materials in rural and urban schools. The study also shows that instructional materials contributed significantly to the variance in the students' achievement scores in English Language

and Mathematics but the contribution was very low. Although, instructional materials negatively influence students' performance.

Recommendations

Although, instructional materials were not enough in predicting students' performance, the following suggestions are considered important;

1. A specific percentage of educational budgets should be voted for instructional materials.
2. Government should implement its policy of establishing learning resource centres in each local government.
3. Teachers must be resourceful by putting the instructional materials to their utmost capabilities to achieve the performance objectives.
4. The principal/head teacher of each school must ensure adequate administration of instructional materials in his/her school.
5. School management should ensure equitable distribution of instructional materials and ensure their effective utilization.

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