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RESEARCH ARTICLE

EFFECT OF INSTRUCTIONAL MATERIALS ON SENIOR SECONDARY STUDENTS' ACHIEVEMENT IN ECONOMICS

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ABSTRACT

The study investigated the "effect of instructional materials on senior secondary students' achievement in Economics. . The study adopted the quasi-experimental design in the sense that the subjects were not randomly assigned into groups. The simple random sampling technique was used to obtain the sampled schools. Sixty (60) students consisting of 30 assigned to experimental group and 30 were assigned to the control group. Intact classes of SS II economics students from schools in Pankshin local government area of Plateau state. The instrument used for the collection of data for the study was titled: "Economics Objective Achievement Test" (EOAT).which was developed by the researcher. The instrument was validated by three experts; One in Economics and two from measurement and evaluation who validated the instrument in term of clarity, content and coverage. The reliability of the instrument was determined using the Kuder-Richardson (K-R 20) which yielded a reliability co-efficient of 0.76. The mean and standard deviation were used to answer the research questions while the t-test statistics was used to test the hypothesis at 0.05 level of significance. The findings revealed that the cognitive constructivist model was better than the conventional method in enhancing students' achievement in economics. Thus, economics teachers should be trained on how to employ this teaching model to improve the quality of economics instruction for better performance of students' in both internal and external examinations in economics

INTRODUCTION

Economics as a subject taught in secondary schools can be explained both verbally and quantitatively, while the verbal explanation involves theoretical expression involves expression of economics facts and relationship between variables, the quantitative aspect on the other hand focuses on the use of statistical and mathematical tools or models in explaining economics concepts. This therefore means that the use of instructional materials in the teaching and learning of economics is inevitable. Bonet (2009) opined that the more the teacher uses instructional materials in his/her teaching, the richer the experience he/she offers to the students and the easier the student acquire these experiences. Thus, the teacher is assisted in overcoming physical difficulties that could have hindered his effective presentation of a given topic. Economics is a social science discipline which studies human behavior as a relationship between ends and scarce means which have alternative uses. Economics as social science discipline (subject), it concentrates on the study of how man makes use of his limited resources to get maximum satisfaction.

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Generally, the study of economics deals with production, distribution, exchange and consumption of goods and services. It also studies the action of the households, firms and government and try to analyze these various actions using three (3) approaches; Theoretical, Graphical and Mathematical approaches in order to achieve her objectives- to equip students from senior secondary schools and subsequent levels with the basic knowledge of being rational, prudent and effective in the management of scarce resources. Therefore, students academic achievement in economic curriculum has been a problem over the years, students have been performing poorly in both terminal examinations and SSCE (WAEC & NECO), perhaps, the reason might be that, there are problems facing the effective teaching of the subject in schools such as; the nature of the subject, the development of the instructional materials, the problem of qualified manpower and others related problems. According to Daramola (2008),instructional materials are all types of material or aids used in the teaching and learning processes. This includes; books, government documents, artifacts, instructional sheet, computer, radio, television, magazine among others. Based on the above definition, it can be deduced that instructional materials are objects (materials) used to facilitate teaching and learning or to make teaching and learning easier for both the teacher and the learners.

Buttressing this Adekunle (2008) noted that instructional materials means anything that can assist the teacher in promoting teaching and learning of economics. Osakwe and Itedjere (1993) summarized these resources as textual like textbooks, audio-visual and human resources, and stated that these resources are either used individual or collectively in any meaningful teaching and learning situation. However, regardless of the type of instructional materials used by the teacher, the use of these materials do not only encourage teachers and students to work collaboratively but also results in more co-operate learning activities among the students. Instructional materials help the teacher to make learning meaningful to the learners (Ede, Oleabhiele & Modebelu, 2016). More so , Ikot,(2008) in his study on instructional materials argued that instructional materials are effective tools for improving students' performance in learning difficult concepts. This implies that the teaching of Economics can be more effective and easier if teachers use instructional materials in their teaching particularly when explaining the quantitative aspects of the curriculum.

Thus, while studies have been conducted on the effect of using instructional materials in the teaching of science subject such as mathematics, physics and Agricultural science among others. literature relating to the use if instructional materials in the teaching of economics in secondary school students achievement is lacking. And there has been a dismal performance of students in both internal and external examination in economics. Thus, the crux of this study " effect of instructional materials on secondary school students' achievement" in Pankshin Local Government Area of Plateau State.

Statement of the Problem

Though the poor delivery of subject content among economics teachers in secondary school can be attributed to factors such as teacher quality, attitudes and absence on motivation among others. The inability of the school authorities to provide the needed materials for instruction has not helped the system. And teachers' inability to employ instructional materials too have continually made teaching and learning of economics too abstract, especially the aspects of quantitative and graphical contents of the subject. Students' achievement in graphical contents of economics has continue to be poor (Mawak and Ugoduluwa, 2011). This implies that poor achievement of students in the subject is also as a result of poor usage of available instructional materials. This problem prompted the choice of this research work; effect of instructional materials on secondary school students' achievement in economics in Panksin Local Government Area, Plateau state.

Purpose of the study

The main purpose of this study is to ascertain the effect of instructional materials on secondary school students' achievement in economics in Pankshin Area of Plateau state. Specifically, the study sought to achieve the following objectives:

- To find out the effect of instructional materials on students' achievement of students in economics
- To ascertain the extent to which instructional materials would help students to improve their achievement in economics based on gender

Research Questions

To provide answer to the study, the following research questions were ask;

- What is the posttest of achievement of students when taught economics using instructional materials?
- What is the mean of achievement score of male and female students taught economics using instructional materials

Hypotheses

The following hypothesis were tested at 0.05 level of significance

Ho_1: There will be no significant difference in the posttest mean score o students exposed to the use of instructional materials in the teaching of economics

Ho_2: There is no significance difference in the mean achievement scores of male and female in the exposed to the use of instructional material in teaching economics

MATERIALS AND METHODS

The target population for the study consisted of all senior secondary school II students in Pankshin Local Government Area of Plateau state. The sample foe the study was made up of 100 senior secondary school II economics students. The choice of SS II students was made because they have been exposed to the introductory aspects of economics and are not under pressure of preparing for external examinations. Three secondary schools each were randomly and purposively selected among the schools in the education zone. The criteria used for the selection of the schools are:

- Schools that have qualified economics teachers
- The school must be a co-educational school and must have enrolled students for External examination for the last five years

The teachers of economics of the selected schools were adequately trained by the researcher on how to teach the groups of students in their schools. For the experimental group, the teacher was taught on how to utilise instructional materials while for the controlled group, the students were taught without the use of instructional materials. The students were taught for four weeks. at the end of the four weeks, a 20-item objective test covering the area taught by the teachers were given to the students in each school. Their responses were analysed using the mean, standard deviation and Analysis of Covariance (ANCOVA**)**

Instrument for Data Collection

The instrument for data collection was the student test scores. The students' performance in Economics test (SPET) developed by researcher was used in measuring students performance in the subject. the instrument consisted of two parts, part A and B. part A contain students' personal data such as names of school, class and gender, while part B comprises

of 20 multiple choice items base on the topics taught and a table of specification.

Validity and Reliability of the Instrument

To ensure content validity, a test blue print was used in the validation of the instrument developed by the researcher Economics test (SPET). While face and content validity were ascertain by experts. Furthermore the reliability of the instrument was determined using the test re-test method.

Procedure for Data Collection

The researcher with the help of subject teachers of the schools administered the pretest and post test using the SPET to the selected classes. However, the treatment using institutional material was given to the experimental group only.

Method of Data Analysis

Both descriptive and inferential tools of statistic were used in data analysis. The mean and the standard deviation was used in answering the research questions while t-test statistic was used in testing the hypothesis at 0.05 level of significance.

RESULTS

Research Question One

What is the mean difference in the academic performance o students taught Economics without instructional materials?

Table 1 above shows that before treatment commenced, there was no much mean difference in the pretest achievement score of the students in the experimental and control groups since the mean achievement score of the experimental group was 48.72 while that of the control group was 46.70 with a small mean difference of 2.02 (ie 48.72-4670).

However, after the treatment, the experimental group with a mean score of 71.06 achieved better than the control with a mean score of 51.01 resulting to mean gain of 20.05 (71.06-51.01). The mean of the experimental group i.e pretest and post test increased from 48.72 to 71.06. That a mean gain of 22.34 compared to the mean gain of the control group which was 4.31 (51.01-46.70).

Research Question Two

To what extent does the means performance of students taught Economics with instructional materials differ from those taught Economics without?

Table 2, shows that the male students in the experimental group with a mean achievement score of 46.11 in the post test achieved better than the female students with mean score of 42.82

Hypothesis 1

There is no significant difference in the mean achievement score of students' taught economics instructional materials.

Hypothesis One

Table 3, show that, the calculate t-value of 5.15 is greater than t-critical of 1.96 at 0.05 level of significant with a degree of freedom of 58, hence, the null hypotheses (Ho) was rejected. i.e. there is significant difference in the pretest-post test achievement score of students in the experiment groups. That is the experimental group which was exposed to instructional materials gained significantly from those that were not exposed to instructional materials

Hypothesis 2

There is no significant difference in the post test performance of students taught economics with instructional materials and those taught without the materials.

Table 1. Mean Difference of Student Performance For Question One

S/N	Group	Test	N	Mean	SD
1	Experimental	Pretest Posttest	30	48..72	11.03
			30	71.06	21.05
2	Control	Pretest Posttest	30	46.70	10.04
			30	51.01	12.08

Table 2.0 Mean difference of student performance for question Two

S/N	Group	Test	Gender	N	Mean	SD
1	Experimental	Posttest	Male	15	46.11	8.19
			Female	15	42.82	12.02

Table 3. Analysis of t-test statistic on students' achievement in pretest-posttest in the Experimental group

Group	N	MeanStd. Dev.	df.	$t_{cal.}$	$t_{crit.}$	Sig. level	Decision
Experimental	30	48.72	11.03				
Ho			58	5.15	1.96	0.05	Reject
	30	71.06	21.05				

Table 4. Analysis of t-test statistic for testing the significance difference between mean achievement score of male and female students taught economics using instructional materials

S/N	Group	Gender	N	Mean	SD	t_{cal}	t_{tab}	df	Decision
1	Experimental	Male	15	46.11	8.19	1.34	1.96	28	Accept Ho
		Female	15	42.82					

The table above shows that t-calculated value 1.34 is less than t-critical of 1.96 at 5% level of significance with 28 degree; we therefore accept Ho and conclude that there no significant difference in the achievement score of male and female students taught economics with instructional materials and those taught without materials.

DISCUSSION

This study was carried out to determine the effect of instructional materials on the students' achievement in economics. The data in table 1 revealed that the pretest score before treatment commenced, showed that the experimental and control groups were similar in terms of their previous knowledge or experience and their level of achievement in economics. This is because the mean achieved score much from the mean achievement score of the of the experimental group 48.72 did the easier not differ much from the mean achievement score of the control group 46.70 in the pretest.

But, after the application of treatment, the posttest scores indicated that the experimental group achieved better than the control group. And the mean difference in the achievement was statistically significant meaning that the use of instructional materials helped the students to achieve better learning outcomes in economics. Thus, the use of instructional materials in the teaching of economics improve students achievement level in economics. This finding is line with Daramola (2008) when he affirmed that the use of instructional materials facilitate teaching/learning or to make teaching/ learning easier for both the teacher and the learners. Also, Bonet (2009) instructional materials concludes that the more the teacher uses instructional materials in his/her teaching the richer the experiences he/she offers to the students and easier the students acquire these experiences.

However, on the issue of gender and students achievement, table 2 and 4 showed that male and female students in the experimental group achieved better than female students with higher mean achievement score of 46.11 as against the mean achievement score of 42.82 for the female counterpart. Also, in table 4, it was observed that there was no statistical difference between the achievement level of male and female students on the use of instructional materials in the teaching/ learning of economics in schools. This findings is not in line with similar findings by Eze 2009; Binda 2005; and Bot (2012) who all agreed that there is a significant difference in male and female students achievement and mathematics but the findings of the work is in consonance with the findings of Ede and Oleabhiele 2016 that there is no significant difference in the level of achievement of male and female students in economics task.

Conclusion

The study determines the effect of instructional materials on students' performance in Economics using the control and experimental groups. Results shows that students who were taught using instructional materials performed better than those taught without instructional materials and then concludes that the use of instructional materials help to improve students' achievement level in Economics.

Recommendations

To improve students' achievement in economics at the secondary school level, study recommends that:

- Instructional materials for teaching economics should be provided to secondary schools
- Economics teachers should ensure that they improvised instructional materials where they are not readily available in the school to make learning more meaningful
- Economics teachers should ensure that instructional materials brought to the class are relevant to the topic and objectives to be achieved by the teacher
- Qualified economics teachers should be employed to teach economics secondary schools
- Economics instructional materials resource rooms should provided in all secondary schools

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