

EFFECT OF DEMONSTRATIONAL LEARNING STRATEGY ON STUDENTS COGNITIVE ACHIEVEMENT IN ECONOMICS

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ABSTRACT

The research work was based on the effect of demonstrational learning strategy on students' cognitive achievement in economics. Two research questions and hypothesis were used for the study. The researcher adopted two groups random post-test only experimental design. The researcher randomly assigned students into experimental and control group. The entire population consists of 24 students which were randomly assigned to experimental and control group. Experimental group and control group consist of 12 students each. Control group consist of 5 boys and 7 girls, while experimental group consist of 8 boys and 4 girls. The researcher developed an instrument titled ECONOMIC COGNITIVE ACHIEVEMENT TEST (ECAT). The instrument was developed based on WAEC syllabus and consists of 15 test items. The reliability was calculated to be 0.83 using Cronbach Alpha. Mean and standard deviation were used to analyze the research questions. While the hypothesis were tested using t-test at 0.05 level of significance. The findings of research question 1 revealed that students taught with demonstrational learning strategy performed better than those taught with lecture method when tested with ECAT. This is evident as the mean score of students taught demonstrational learning strategy are higher than those taught with lecture method with a mean difference of 35.0. The findings of research question 2 revealed that the post-test mean scores of female and male students taught demonstrational learning strategy are 85.6 and 70.6 respectively. This shows that female students performed better than their male counterpart with a mean difference of 15.5. Null hypothesis 1 showed that the t-calculated value of 19.74 was higher than t-tabulated value of 2.052 at 0.05 level of significance. Therefore the null hypothesis was rejected. Indicating that there is significant difference in mean scores of students taught economics with demonstrational learning strategy and those taught with lecture method in FAMVAR secondary school, Port Harcourt. Null hypothesis 2 revealed that the t-calculated value of 16.67 was higher than t-tabulated value of 1.296 at 0.05 level of significance. Therefore the null hypothesis was rejected. This shows that there is significant difference in mean scores of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt. Finally it was recommended that Teachers of economics should include demonstrational teaching strategy in teaching economics and School management should train teachers on the use of demonstrational teaching strategy in teaching economics in secondary schools.

KEYWORDS: *Demonstrational learning strategy, lecture method, Cognitive achievement.*

INTRODUCTION

Lecture method of teaching is one of the most common methods of teaching economics in secondary institution in Nigeria. Melissa (2016) stated that lecture method is a teaching method where an instructor is the central focus of information transfer. Typically, an instructor will stand in front of the class and present information to the students to learn. Boundless (2016) also view lecture method as the process of teaching by giving spoken explanations of the subject that is to be learned. Lecture method is often accompanied by visual aids to help students visualize an object or problem. Also, Paris (2016) stated some of the advantages of lecture method as a teacher have control over the class, new materials can easily be introduced, and it is effortless. The lecture method is also faced with a lot of challenges. Other methods like demonstration, discussion, collaborative, project, and so on are also applied in the teaching of economics.

Demonstrational method is an active system of teaching in the classroom. Parts (2016) stated that demonstration method involve the use of the demonstration or doing method to teach skill. Demonstrate step by step, the procedure of a given task, using the exact procedure if possible. The basic method of instruction for teaching skill-type subject matter is the demonstration-performance method of instruction. Eric (2016) stated that the demonstrator retains the formal authority role while allowing teachers to demonstrate their expertise by showing students what they need to know. This style gives teachers opportunities to incorporate a variety of formats including lectures, multimedia presentations and demonstration. As a teaching technique, a demonstration is a valuable alternative to getting students to learn by doing (NCERT, 2013).

Different teaching methods can be used in teaching economics at secondary school level. Lecture method is mostly applied in the teaching of economics at post-primary school. Economics is one of the vital social science subjects in the school curriculum. Observation show that economics as a subject is not properly taught in secondary schools in Nigeria (scholars work, 2014). The student's performance is nothing to write home about. In the external examinations majority of student fail to make credit grades with such poor results, they consequently fail to gain admission into Nigerian Universities (scholars work, 2014). The problem of students' poor performance in economics may be attributed to teaching method adopted by the teachers.

Students can be accessed through cognitive, effective and psychomotor domain of learning. YAM (2016) describes the cognitive domain as faculty and intellectual based assessment of individual achievement. NSDL (2016) stated that cognitive domain include content of knowledge and development of intellectual skills. Alleydog (2016) revealed that cognitive test is designed to measure a person's intelligence and mental ability. Some of the areas measured by cognitive test include problem-solving, verbal ability, numerical ability, reasoning and so on. When classroom teaching is not effective, it may affect students' performance when subjected to cognitive test. This may be attributed to the teaching style adopted by the teacher. There is therefore the need to test the demonstrational teaching strategy to see if students' performance will improve.

PURPOSE OF THE STUDY

The study looked into the effect of demonstrational learning strategy on students' cognitive achievement in economics. Specifically the study seeks to:

1. Determine the difference in mean score of students taught economics with demonstrational learning strategy and taught with lecture method in FAMVAR secondary school, Port Harcourt.
2. Find out the difference in mean score of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt.

RESEARCH QUESTIONS

The following research questions guided the study:

1. What is the difference in mean score of students taught economics with demonstrational learning strategy and taught with lecture method in FAMVAR secondary school, Port Harcourt?
2. What is the difference in mean score of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt?

HYPOTHESES

The following hypotheses guided the study and was tested at 0.05 level of significance:

H₀₁: There is no significant difference in mean scores of students taught economics with demonstrational learning strategy and taught with lecture method in FAMVAR secondary school, Port Harcourt.

H₀₂: There is no significant difference in mean scores of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt.

SCOPE OF THE STUDY

The study is limited to students in SS2 studying economics in FAMVAR secondary school, Port Harcourt. It is also limited to the use of demonstration and lecture method of teaching economics.

METHODS

The researcher adopted two groups random post-test only experimental design. The researcher randomly assigned students into experimental and control group. The entire population consists of 24 students which were randomly assigned to experimental and control group. Experimental group and control group consist of 12 students each. Control group consist of 5 boys and 7 girls, while experimental group consist of 8 boys and 4 girls.

The researcher developed an instrument titled ECONOMIC COGNITIVE ACHIEVEMENT TEST (ECAT). The instrument was developed based on WAEC syllabus and consists of 15 test items. The reliability was calculated to be 0.83 using Cronbach Alpha. The 15 test items were validated by two economic teachers from New Covenant Secondary School Port Harcourt. Their recommendations and corrections were effected before final copy was produced for the study. Students in experimental group were subjected to treatment for two weeks after which both groups were given post-test.

Mean and standard deviation were used to analyze the research questions. While the hypotheses were tested using t-test at 0.05 level of significance.

RESULTS

RESEARCH QUESTION 1

What is the difference in mean scores of students taught economics with demonstrational learning strategy and those taught with lecture method in FAMVAR secondary school, Port Harcourt?

TABLE1: Difference in mean scores of students taught economics with demonstrational learning strategy and those taught with lecture method in FAMVAR secondary school, Port Harcourt.

GROUPS	TEACHING METHOD	NUMBER OF SUBJECTS	POST-TEST MEAN	MEAN DIFFERENCE
DEMONSTRATIONAL LEARNING STRATEGY	DLM	12	75.7	35.0
LECTURE METHOD	LM	12	40.7	
TOTAL		24	35.0	35.0

Based on the findings in research question 1, it revealed that students taught with demonstrational learning strategy performed better than those taught with lecture method when tested with ECAT. This is evident as the mean score of students taught demonstrational learning strategy are higher than those taught with lecture method with a mean difference of 35.0

RESEARCH QUESTION 2

What is the difference in mean scores of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt?

TABLE 2: Difference in mean scores of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt.

DEMONSTRATIONAL LEARNING METHOD	NUMBER OF SUBJECTS	POST-TEST MEAN	MEAN DIFFERENCE
FEMALE	4	85.6	15.5
MALE	8	70.6	
TOTAL	12	15.15	15.5

Research findings of table 2 revealed that the post-test mean scores of female and male students taught demonstrational learning strategy are 85.6 and 70.6 respectively. This shows that female students performed better than their male counterpart with a mean difference of 15.5.

HYPOTHESIS 1

There is no significant difference in mean scores of students taught economics with demonstrational learning strategy and those taught with lecture method in FAMVAR secondary school, Port Harcourt.

TABLE 3: T-test analysis of the difference in mean scores of students taught economics with demonstrational learning strategy and those taught with lecture method in FAMVAR secondary school, Port Harcourt.

SUBJECTS	TEACHING METHOD	NUMBER OF SUBJECTS	MEAN	STANDARD DEVIATION	DEGREE OF FREEDOM	t-CA L.	t-TA B	DECISION
DEMONSTRATIONAL LEARNING STRATEGY	DLS	12	75.7	17.9	27	19.74	2.052	REJECT
LECTURE METHOD	LM	12	40.7	12.9				

Table 3 of null hypothesis 1 showed that the t-calculated value of 19.74 was higher than t-tabulated value of 2.052 at 0.05 level of significance. Therefore the null hypothesis was rejected. Indicating that there is significant difference in mean scores of students taught economics with demonstrational learning strategy and those taught with lecture method in FAMVAR secondary school, Port Harcourt.

HYPOTHESIS 2

There is no significant difference in mean scores of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt.

TABLE 4: T-test analysis of mean scores of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt.

SUBJECTS	TEACHING METHOD	NUMBER OF SUBJECTS	MEAN	STANDARD DEVIATION	DEGREE OF FREEDOM	T-CA L.	T-TA B	DECISION
FEMALE	DLS	4	85.6	14.0	11	16.67	1.296	REJECT
MALE	DLS	8	70.6	17.61				

Table 4 of null hypothesis 2 revealed that the t-calculated value of 16.67 was higher than t-tabulated value of 1.296 at 0.05 level of significance. Therefore the null hypothesis was rejected. This shows that there is significant difference in mean scores of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt.

SUMMARY OF FINDINGS

The findings of the study are summarized as follows:

1. The findings of research question 1 revealed that students taught with demonstrational learning strategy performed better than those taught with lecture method when tested with ECAT. This is evident as the mean score of students taught demonstrational learning strategy are higher than those taught with lecture method with a mean difference of 35.0.

2. The findings of research question 2 revealed that the post-test mean scores of female and male students taught demonstrational learning strategy are 85.6 and 70.6 respectively. This shows that female students performed better than their male counterpart with a mean difference of 15.5.
3. Null hypothesis 1 showed that the t-calculated value of 19.74 was higher than t-tabulated value of 2.052 at 0.05 level of significance. Therefore the null hypothesis was rejected. Indicating that there is significant difference in mean scores of students taught economics with demonstrational learning strategy and those taught with lecture method in FAMVAR secondary school, Port Harcourt.
4. Null hypothesis 2 revealed that the t-calculated value of 16.67 was higher than t-tabulated value of 1.296 at 0.05 level of significance. Therefore the null hypothesis was rejected. This shows that there is significant difference in mean scores of male and female students taught economics with demonstrational learning strategy in FAMVAR secondary school, Port Harcourt.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. Teachers of economics should include demonstrational teaching strategy in teaching economics.
2. School management should train teachers on the use of demonstrational teaching strategy in teaching economics in secondary schools.

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