

Effectiveness of Good Classroom Conditions on the Academic Achievement of Secondary School Students in Edo Central Senatorial District

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ABSTRACT--- *The purpose of this study was to determine the effectiveness of good classroom conditions on the academic achievement of secondary school students in Edo State of Nigeria. To accomplish this objective, one research question and one hypothesis was formulated and investigated in the study. The study employed the quasi-experimental design. Participants from three public secondary schools in Edo central senatorial district comprising 450 S.S 11 students were used for the study. 20 test items in mathematics and English language was the instrument used in the study to pre-test the participants and another 20 test items in the same subjects was used to post-test the participants. All the participants were exposed to teaching in English Language and Mathematics from their scheme of work for six weeks and tested before being moved to different classroom conditions to be taught for another six weeks in the same subjects. Participants thereafter were post-tested to know the effect of classroom conditions on each group of participants. The result of the study revealed that good classroom conditions enhance the academic achievement of students. Based this finding, it is recommended that students should be taught under good classroom conditions to enhance their academic achievement.*

Keywords--- Academic achievement, Classroom conditions, Good classroom condition, Poor classroom condition

1. INTRODUCTION

Secondary school education occupies a very prominent position in our educational system. It is both academic and vocational (Federal Government of Nigeria, 2004) secondary Education also forms the gate way into tertiary institutions. One of the challenging features of secondary school Education in Nigeria has been lack of good classroom conditions for effective teaching and learning. In order to achieve the goals of secondary education, good classroom conditions are indispensable. The classroom condition constitutes an important aspect of the building condition. A classroom without good ventilation, thermal comfort, lighting, acoustics, comfortable desks and chairs, good class size, good roof and ceiling, windows and doors, good floor, creates negative learning environment which does not encourage child-centered learning which is supposed to be the focus of contemporary education. Evidence suggests that an improperly conditioned classroom may cause stress to the occupants both directly and indirectly (Egumu A.C, 2009).

Until recently, professionals involved in school design have assumed that as long as certain minimum standards for size, acoustics, lighting and temperature were met, a productive environment existed and teaching and learning would proceed normally (Conners, 1982). In many secondary schools in Nigeria, classrooms, libraries, and laboratories are nothing to write home about, all leading to decline in academic standards and achievement (Odia and Omonfonmwan, 2007). To solve this problem, several efforts have been made by government and non-governmental organizations in providing facilities to some schools. One of these efforts is the renovation of some schools and provision of desks, benches to some selected schools in Edo State by the state government (Edo Broadcasting service, 2010). Despite these efforts, there seems to be consistent problem of having good classroom conditions in secondary schools in Edo State of Nigeria. The call for good learning environment has been persistent. There is the need therefore to try to find out the effectiveness of good classroom conditions on the academic achievement of students. This study is one of such efforts.

1.1 Research Question

Will good classroom conditions enhance the academic achievement of senior secondary school students?

1.2 Research Hypothesis

There is no significant relationship between good classroom conditions and academic achievement of students.

1.3 The Problem

For some years now, the academic performance of students at the senior school certificate examination in Edo State has been on the decline (Eghonghon 2009). A situation analysis of current standards and quality of our schools and products are low (FMG 2009). This has been a subject of concern to all Stake holders in education, especially the government, parents, school administrators and the general society.

Majority of schools whether in Urban or Rural Areas have the problem of decaying infrastructure. The physical state of classroom is very poor, with floors full of holes, roofs and ceiling broken, overall, the fabric is in a poor state of repair. In some circumstances, furniture is stolen and classroom used as toilet. (Federal Ministry of Education, 2009) many public and private secondary schools lack the essential infrastructure to enable them function as safe, efficient and effective schools.

Although both the physical environment and classroom conditions have been documented as having an impact on students' achievement and behavior, there have been relatively few studies that examine this issue in great detail. (Earthman 1985, Ianham, 1999). This study therefore seeks to find out specifically the effectiveness of good classroom conditions on the academic performance of students.

1.4 Design of Study

The study is an experimental one employing the quasi-experimental research since intact groups were used.

1.5 Sample

Through purposive sampling technique, 2 secondary schools with poor classroom conditions especially for SS11 classroom were selected from the public secondary schools in Esan central senatorial district of Edo State, Nigeria. From these schools, a total number of 302 participants were obtained for the study. Through the same method, one public secondary school with good classroom conditions for SS 11 classes consisting of 148 students were obtained for the study in the same senatorial district. All the SS11 classes from the three schools comprising three arms each (A,B,&C) constituted the sample for the study. The total sample for the study was therefore 450 participants.

1.6 Scope of the Study

The study covers three public secondary schools in Edo central senatorial district. The situation of classroom conditions cover the following areas:- wall integrity, furniture, chalkboard, floor, design of the classroom, ceiling, roof, ventilation, and natural lighting. The instrument covered test items in English and Mathematics because they are two key subjects in senior school Certificate Examination. Only SS 11 classes were used for the study.

2. INSTRUMENT FOR DATA COLLECTION

The instrument used for data collection in the study was 20 standardized test items in English language covering the areas taught from the students' reading text and another 20 test items from their mathematics text book.

2.1 Treatment Procedure

All the SS11 students in their schools were taught for a period of six weeks by the researcher and her assistant in English and Mathematics. They were there-after pre-tested by administering the first instrument which was 20 selected questions from their text in English and Mathematics. The results were recorded. The students in SS11 classes in the two schools with poor classroom conditions were moved, to another classroom. One, to a good classroom condition, and the other to a poor classroom condition. The SS11 students in the school with good classroom conditions were moved to poor classroom conditions. All the students in SS 11 classes from the three schools were again taught for a period of six weeks by the researcher and her assistant in English and Mathematics in their new classroom conditions. The good classroom conditions are the newly built classrooms by the state government. (good classroom design, furniture, chalkboard, floor, ceiling, roof, ventilation and natural lighting.). all the participants were post-tested in the new classroom conditions after the six weeks' teaching, with another 20 questions from their text and their scores recorded. The pre-test and post-test scores of the students in the three groups were correlated to get the result of the study.

3. DATA ANALYSIS

The hypothesis in the study was analyzed with the analysis of covariance (ANCOVA) statistic to correct the mean difference observed in the pre-test measure between the experiential and control group since intact groups were used. Cognizance was also taken of the correlation between the pre-test and post-test measures of the groups.

4. FINDINGS AND DISCUSSION OF RESULTS

TABLE 1: Pre-test and post-test scores for each group in their previous Classrooms Condition.

GROUP	CLASSROOM CONDITION	TESTING PERIOD	NO OF STUDENT	\bar{X}	S.D
A School 1	Poor	Pre-test	152	30.14	2.33
		Post- test	152	28.09	4.28
B School 2	Poor	Pre- test	150	20.42	3.22
		Post- test	150	20.58	3.44
C School 3	Good	Pre- test	148	28.08	920
		Post- test	148	36.42	3.38

The above table shows that the participants in group A who were taught initially under poor classroom condition had a pre-test mean score of 30.14 and a post-test mean score of 28.09 indicating lack of improvement in their academic achievement.

Participants in group B who were also students in a poor classroom condition had little or no improvement in their academic achievement (from a pre-test mean score of 20.42 to a post-test mean score of 20.58).

Participants in group C which consists of students taught under the good classroom condition had a pre-test mean score of 28.08 and a post-test mean score of 36.42 indicating an improvement in their academic achievement.

Table 11: Pre-test and post-test scores for groups A, B, and C in their new classroom situation.

GROUP	CLASSROOM CONDITION	PERIOD	NO OF STUDENTS	\bar{X}	S.D
A School 1	Poor	Pre-test	152	30.21	946
		Post-test	152	21.67	5.75
B School 2	Good	Pre-test	150	20.14	5.83
		Post-test	150	35.09	1.70
C School 3	Poor	Pre-test	148	30.20	820
		Post-test	148	15.12	3.42

Table 11 shows the performances of the groups under a different classroom condition from that of table 1. The table shows that participants in group A who were taken from a poor classroom condition to another poor classroom condition again had a pre-test mean score of 30.21 and a post-test mean score of 21.67 which again indicates no improvement in their academic performance under poor classroom condition. Instead their academic achievement even went down lower than they previously achieved under the pre-test.

Group B participants who were taken from poor classroom condition to good classroom condition had a pre-test mean score of 20.14 and a post-test mean score of 35.09. This shows a remarkable improvement on the part of these participants who were taught under good classroom conditions. A further observation of the performance of participants in group C reveals that good classroom condition facilitates the academic achievement of students. The participants in group C were moved from good condition to a poor one. Under the good classroom condition in table 1, they had a post-test mean score of 36.42 while when taught under the poor classroom condition, their mean score went down from a pre-test mean score of 30.20 to a post-test mean score of 15.12.

From the findings therefore, it can be concluded that good classroom conditions enhance the academic achievement of students. This finding is in agreement with Otu, (2002) observation that learning environment has a significant relationship with the academic achievement of students. It is also in agreement with Egumu(2005) who opined that the qualification and background of teachers can only be complimented when the right and adequate learning facilities are provided for effective teaching and learning in achieving results optimally.

5. CONCLUSION

Based on the finding, it was concluded that good classroom condition enhances the academic achievement of students. It is therefore recommended that students be provided and taught under good classroom conditions to enhance their academic achievement.

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