

# Effect of Teachers' Attitude on Senior Secondary School Students' Performance in Physics in Benue State, Nigeria

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## ABSTRACT

*This research work investigates the effect of teachers' attitude on students' performance in physics in senior secondary performance in physics in senior secondary schools in Makurdi in local government Area of Benue state. Related literatures were review in chapter two of this study. With the aid of the observational schedule in an interview with physics teacher and test administration to students, data were collected. The data were tabulated and analyze using mean scores and chi-square to answer the research questions. The findings review that teachers' qualification and years of experience has a facilitating effect on the academic achievement of senior secondary school students in physics. Conclusions were drawn base on the findings of this study. Necessary suggestions and recommendations were made such as government should recruit qualify teachers to teach. Teachers that are non- professional should be allow to go on training to become professionals, this would help the improvement of their methods of teaching students.*

**Keywords:** Students, Performance, Physics, Teachers Attitude, Sin-Qua Non

## INTRODUCTION

Physics as discovered by research is one of the core subjects of emphasis in science. About (1997) consequently physics students especially at senior secondary school level need to be groomed on the subject. According to Nelkon (1986), physics is a science which deals with the behavior of matter. In the same way, Griffith (2001) defined physics as the study of basic nature and interaction that governs its behavior. Griffith outlines the major sub fields of physics as mechanics, thermodynamics, electricity, magnetism, optics and atomic physics. The application of these sub fields of physics to science and technology development in life is immeasurable. As a matter of fact, physics "sin-qua non" for sound development.

Anyakoha (1999) stated that physics is one of the three basic subjects taught in senior secondary schools in Nigeria, physics as a subject according to Stofflet and Stoddard (2001) should be taught starting from the senior secondary schools with lecture and demonstration method. This is to develop conceptual understanding at the subject matter. This study simply seeks to answer the following questions "Does teachers qualifications affects students performance"? Finally useful

recommendations were made based on the results of the study.

## RESEARCH HYPOTHESIS

In order to test the relationship between teachers qualification, years of experience and students performance, the researchers designed two research hypothesis and they are;

1. There is no significant difference between teachers qualification and students performance
2. There is no significant difference in the years of teaching experience of teachers and physics students performance

## REVIEW OF RELATED LITERATURE

The notation behind this is to review briefly and precisely the opinions of some prominent writers and individual contribution on the concept of effect of teachers altitude on students performance in physics in senior secondary schools in Makurdi local government area of Benue state.

A review of related literature on the factors that affect students performance in physics revealed that teachers belief about students will transform their altitudes in ways that confirm the initial expectations Eguda (2006) this is a concept at the self- fulfilling prophecy. It explains how teachers perception creates the social reality.

Brophy and Good (2007) suggested that teachers may differentiate their altitude towards students base on their expectations and that students may respond to teachers altitude or behavioural cues and alter their self-concept and achievement motivation to confirm to their teachers expectation.

According to Akinson (2008) on key factors influencing students performance in physics. It was discovered that there was a positive correlation between students reading and study habits. The results indicated that students who were motivated achieved high mean scores in physics test, those students who were unmotivated achieved low mean score in the area. This question of motivation being a factor according Akinson could only be done regarding the attitudes and perception of teachers on these factors. Thus Robins (2008) considered motivation as the process that account for an individual's intensity, direction and persistence of effort towards attaining goals

## METHODOLOGY

The discussion here presents a step-by-step method and procedures employed or use in the research. It is concerned with the method adopted for collection of data in this study. It is designed to give vivid description of the methodology of data collection. It is a study and systematic procedure of gathering information about the research topic to make sure that a data collected is reliable and dependable

## SAMPLE AND SAMPLING TECHNIQUES

The research uses the simple and random sampling technique for selecting school and respondents. Names of schools were written in a paper and ruffled and put in a container from which five (5) schools were pick randomly given each school an opportunity to be pick. For the respondents, numbers were given to students and only those with even numbers were selected and others rejected. This is to have a representation of the entire population. It will be cumbersome task for the researcher to study the entire population of senior secondary school physics teachers in Makurdi local government area.

In each senior secondary school selected, one physics teacher was observed in the classroom two (2) times and gave a total of ten (10) observations.

### **INSTRUMENTATION**

Data for this research work were collected using three basic instruments which include;

- a) **Observation:** the researcher while carrying out the research made personal observation in various schools selected. The observations were mostly on altitudes of physics teachers and how they interact with students in a classroom.
- b) **Teachers Interview:** The researcher also arranged for interview with the physics teachers at the end of each observation. Interview was aimed at getting some vital information from the physics teachers which will help

in this study. The interview are a five items question that includes ;

1. How long have you been teaching physics?
2. What is your qualification?
3. Did you find physics difficult to teach?
4. Do you enjoy teaching physics?
5. What four things do you think you need to make you a better physics teacher

c) **Research Made Test Questions:** a five items students questions were set at the end of each lesson base on the concept taught by the physics teacher in the selected schools. These questions were been administered to the students at the end of each observation. The aim of this is to help the researcher determine if the students understand the physics lesson.

### **DATA COLLECTION**

The researcher collects data for this study through the process of observation, interview with physics teachers and test administrations to the students. The lesson observation schedule was used for data collection during classroom observation in senior secondary school with lesson period of forty (40) minutes. Each physics teacher from different senior secondary school was interview and responses recorded. Also the text items were administered to students and researcher graded the test using marking scheme.

### **DATA ANALYSIS**

After collection of data by the researcher, the researcher reduces the information into statistical data. The data collected were presented in table for analysis. Simple mean was used in answering research questions while the chi-square is use in answering research hypothesis.

**RESULTS**

**Hypothesis 1**

There is no significant difference between teachers qualification and students performance

**Table 1: Teachers Qualification and Students Performance**

		N.C.E Physics Teachers	B.S.c Physics Teachers	B.S.c(e d) Physics Teachers	total	Chi-Square (X <sup>2</sup> ) Calculated	Degree Of Freedom	Chi-Square (X <sup>2</sup> ) Table At 0.95	Remarks
Mean performance of students in 1 <sup>st</sup> and 2 <sup>nd</sup> achievement test	1st Test	20	15	21	56	1.64	2	0.103	Reject the stated hypothesis because the chi- square x <sup>2</sup> calculated exceed the Chi-Square (X <sup>2</sup> ) Table (Critical) value at 0.95 significant levels. So students performance is affected by teachers qualifications
	2 <sup>nd</sup> Test	13	14	24	51				
	Total	45	27	33	107				

**Hypothesis 2**

There is no significant difference in the years of teaching experience of teachers and physics students performance

**Table: 2 Showing Years of Experience and Physics Students Performance**

		N.C.E Physics Teacher s	B.S.c Physics Teacher s	B.S.c(e d) Physics Teacher s	Tot al	Chi- Square (X <sup>2</sup> ) Calculate d	Degree Of Freedo m	Chi- Square (X <sup>2</sup> ) Table At 0.95	Remarks
Mean performance of students in 1 <sup>st</sup> and 2 <sup>nd</sup> achievement test	1st Test	13	17	17	16	8.03	3	0.352	Reject the stated hypothesis because the chi- square x <sup>2</sup> calculated exceed the Chi-Square (X <sup>2</sup> ) Table (Critical) value at 0.95 significant levels. So students performance is affected by teachers years of experience.
	2 <sup>nd</sup> Test	15	15	14	26				
	Tota l	27	32	31	42				

## DISCUSSION

From the analysis of this research work, the following findings were made;

The result of the achievement test administered to students shows that many teachers teaching physics in senior secondary school in Makurdi Local Government area are not qualify to teach the subject. The student achievement test shows that only teachers with N.C.E and B.s.c(ed) physics holders should be allowed to teach physics. This agree with ola(2005), who observed that many of the teachers that teach physics subjects in senior secondary

school are not professionally trained to acquire professional expertise necessary in teaching the subject. They are compelled to teach the subject in most cases causes more harm than good to academic performance of students in physics. The findings also in that of Ogunleye (2006) who found out that student poor performance is attributed to teachers' qualification. From the results of the students performance test it could be seen that with one year teaching experience had an average score of 14 in the achievement test administered to students which is below the decision mean. The data

shows that physics students performance is affected by teachers years of experience.

From the analysis of the students achievement test results, it could be seen that more years of teaching experience will aid the students performance positively. This finding agree with Etuk(2007) who found out that highly experience teachers positively influence students performance. The findings also agree with Philips (2008) who observes that students learn more from experience teachers than they do from less experience teachers.

### CONCLUSION

From the analysis of the results the following conclusion are made

1. Unprofessional teachers should not be allowed to teach physics in senior secondary schools
2. Only the teachers with the educational qualification should be allow to teach physics in senior secondary schools
3. Teachers should update their knowledge and learn more skills and techniques in teaching.
4. Physics teachers should be encourage spending more time in teaching service so as to acquire experience in teaching

### RECOMMENDATION

From the research work conducted the following recommendations were made for general improvement in teaching physics in senior secondary schools.

1. There should be immediate provision of physics laboratory materials in all senior secondary schools by the governments
2. The government should motivate the physics teachers by paying their salaries end entitlements
3. Parents should purchase the recommended physics textbook and provide fund for practicals materials for their children
4. The local government should assist the school by donating textbooks to the school libraries.
5. The parents and the students should be enlighten on the importance of physics
6. Fresher's courses, and workshops as well as seminars should be organized for physics teachers in order to update their knowledge and learn more skills and techniques in other concept that is difficult for them.
7. Government should employed qualify and professional teachers to teach physics in senior secondary schools

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