

Teachers' Attitude and Gender Factor as Determinant of Pupils' performance in Primary Science (Pp. 326-332)

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Abstract

Teachers are regarded as the basic tools in education and curriculum implementations. The quality of any nation's education is determined by the qualities of the teachers and their attitude to the profession. This paper seeks to examine the influence of the teachers' attitude and gender factor on the academic performance of the primary schools pupils. Fifty science teachers were randomly selected from seventy (70) primary schools out of the ninety-seven (97) primary schools in ondo west local Government in ondo state and two hundred pupils were randomly selected and used for the same study. Two instruments were used to collect data, the Teachers' attitude questionnaire (TAQ) and Primary science achievement test (PSAT) .The research design adopted for this study was survey design. The reliability of the instrument was 0.78 and 0.84 by using crumbach alpha and k-21 respectively. Pearson moment product correlation coefficient was used to analyze the instruments. The result indicated that there exists a significant relationship between teachers' attitude and pupils' performance in primary science. The result also indicated that there exists no significant relationship between the performance of pupils taught by male and female teachers in primary science. Recommendations were made on how to promote further development of primary science teaching and learning in Nigeria.

Key words: Attitude, Gender, Performance, Nigeria

Introduction

Several factors have been identified to cause poor performance of students in science and science related subjects. Among the problems identified include, inadequate teaching strategies, poor laboratory facilities, lack of fund, poor quantitative ability among others (Adesoji, 2002; Lavy, 2004; Afolabi&Audu, 2007). Odubunmi and Balogun, (1985) have identified teachers' personality and attitude towards their teaching subjects as factors contributing to poor performance in science subjects. Simpsom and Troost (1982) found out that attitude is another factor that determines achievement and enrolment of students in science subjects. Attitudes as defined by smith (1998) as a relatively enduring predisposition to respond in a relatively consistent manner towards a person, object situation or idea. Adesoji (2002) defined attitude as cognitive, emotional, and action tendency to a particular behavioural intent. He ascertained that that attitude is an important factor that determined achievement of students in sciences. Halladyna and shanghnessy (1983) concluded that there are a number of factors that contributed to poor performance of students in science subjects, he identified teachers' attitude are a major factor and he concluded that teachers' attitude is significant in determining the achievement of students in sciences.

Teachers as basic tool in curriculum implementation remain a very crucial factor that influence students' experience and achievement, and continuing educational development. These is no longer achievable since teachers are accorded with little or no respect in the society due to insufficient fund, lack of motivation incentives, delay in salary payment among others all these affects teachers activities, causing psychological and emotional trauma which in turn affect his output. Gender is another factor that has caught researchers' attention in science education. Effect of gender on learning outcome in sciences is still in debate. Okpala and Onocha (1988) established significant gender difference in favour of boys while Iroegbu (1998) found out that gender difference do not have effect. Afolabi, etal (2007) found that teachers' gender has significant effect on the performance of students in sciences. Basu and Chakroborty (1996) reported that student taught by male teacher achieve higher than those taught by female teachers this was in contrast with Adedipe (1986) that reported a conflicting finding in which students that are taught by female teachers performed significantly better than those taught by their female counterparts. The effect of teachers' gender on pupils' academic performance in primary science have not been ascertained. This paper tends to find out if attitude of teachers influence

pupils' performance in primary science and also how teachers' gender can enhance their academic performance.

Statement of the Problem

Teaching in Nigeria, is a profession that has been accorded with little or no respect and many teachers were not readily disposed to be associated with the profession and this have caused loss of interest, look warm attitude and drift into more respectable profession in the society. Evidence supports that right attitude could foster and improve students' achievement in science. But to what extent can attitude influence pupils' performances in primary science is unknown. Thus, to what extent will teachers' attitude influence the performance of pupils in primary science and to what extent do the teachers' gender affects pupils' performance? These are the questions that have necessitated the investigation of the influence of the teachers' attitude and gender factor as determinant of pupils' performance in primary science.

Purpose of the Study

The study is designed to achieve the followings:

- (1) To investigate if teachers' attitude influence pupils' performance in primary science.
- (2) To investigate if there is a significant difference in the performance of pupils' taught by male and female teachers in primary science.

Hypotheses

- (1) There is no significant relationship between teachers' attitude and pupils' performance in primary science.
- (2) There is no significant difference in the performance of pupils' taught by male or female teachers in primary science.

Methodology

The research design adopted for study was descriptive survey design. The primary science achievement test (PSAT) and teacher's questionnaire was administered to the pupils through the help of the research assistants (science teachers) in all the schools selected for the study. The subjects were assured of the confidentiality of their process. The results were subjected to analysis. The population of this study comprises of all the primary schools science teachers and primary schools pupils in Ondo west local government in Ondo state Nigeria. 50 teacher and 398 pupils were involved. 20 teachers and 200

pupils were used for the study. This comprises of 15 male and 5 female teachers. Also, 138 male pupils 62 female pupils were used respectively. A random sampling technique was adopted to select schools from the target population. The pupils were used in their intact classes setting. The instrument used to measure teachers 'attitude and student achievement test were developed by the researcher and the face and content validity was ascertained by two integrated science teachers, one education evaluator and one physics educator expert. Their comments and suggestions on the suitability were incorporated into the final draft.

The instruments were teachers' attitude questionnaire (TAQ) and primary science achievement test (PSAT). The questionnaire has 25- items on the teachers' attitude while PSAT has 25- items on primary science. The TAQ was scored using a score range of four (4) for strongly agreed (SA) to one (1) for strongly disagreed (SD) for positive items and the scoring was reversed for negative items. The Instruments were trial tested with subjects who were random selected from two schools within the population but not part of the main study. Crombach alpha and k-R-21 were used to calculate the reliability coefficient of the two instruments. The coefficient of internal consistency of the TAQ was 0.78 and that of the (PSAT) was 0.84.

Pearson moment product correlation coefficient (PPMC) and t-test were used in testing the two hypotheses formulated at $p < .05$ alpha level of significance.

Result

Hypothesis 1

There is no significant relationship between the teachers' attitude and pupils' performance in primary science.

The analysis is presented in table 1.

The result of the analysis in Table 1 shows that the calculated t-value of 54.60 is greater than the critical t-value of 1.96. Therefore, the null hypothesis which stated that there is no significant relationship between teachers' attitude and pupils' performance was rejected. This implies that there is a significant relationship between teachers' attitude and pupils' relationship in primary science.

Hypothesis 2

There is no significant relationship between teachers' gender and pupils' performance in primary science.

The analysis of this hypothesis is as presented in table 2

The result of the analysis in Table 2 shows that the calculated t- value of 1.5 is less than the critical t-value of 1.96. Therefore, the null hypothesis which stated that there is no significant difference between the performances of pupils' taught by male and female teachers in primary science was not rejected. This implies that there is no significant difference between the performances of pupils taught by female and male teachers respectively.

Discussion

The analysis in table 1 showed that teachers' attitude have significant effect in pupils' performance. This was in line with the findings of Lavy, 2004 that found out that teacher's attitude has a significant effect in determining student performance in science subjects. The analysis on table 2 showed that teachers' gender has no significant effect on pupils' performance. The result is in agreement with Udousoro 1999; Okpala and Onocha 1995 they ascertained that gender of teachers failed to have significant effects on students' performance.

Conclusion

Based on the findings of this research work, the following conclusions were made:

- (1) Teachers' attitudes have a lot of influence in determining the performance of pupils in primary science.
- (2) Teachers 'gender do not have any effect on pupils performance in primary science.

Recommendation

- (1) Teachers should be well catered for by paying their salaries and allowances on time.
- (2) Government should organise seminar and workshops for them on regular basis.
- (3) Efforts should be intensifying on professionalization of teaching so that due respect can be giving to teaching profession.
- (4) All teachers should be made to register with the teacher's registration council.

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Table1: Analysis of relationship between teachers 'attitude and students' performance in primary science.

Variables	N	$\Sigma X, \Sigma Y$	$\Sigma X^2, \Sigma Y^2$	ΣXY	r	Df	t-cal.	t-crit
Teachers' attitude(x)	200	13836	10009342	1039666	0.97	198	54.60	1.96
Students' Performance	200	14274	1073810					*

*significant

Table 2: T-test analysis of the performance of pupils taught by male and female teachers

Gender	N	Y	SD	DF	t-cal.	t-crit.	p<.05
Male	138	39.60	3.92	198	1.53	1.96	NS
Female	62	38.54	4.08				

NS = Not significant