

**INFLUENCE OF TEACHER’S QUALIFICATION, EXPERIENCE AND ATTITUDE
ON SECONDARY SCHOOL STUDENTS ACADEMIC PERFORMANCE IN BASIC
SCIENCE IN OYO STATE.**

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ABSTRACT

Education stakeholders are concerned with factors responsible for student's poor performance in Basic science. The research work investigated the extent to which teachers' qualification, experience and attitudes affect the student's academic performance in basic science using survey research design. Simple random sampling technique was used to select four out of the thirty-three Local Government Areas in Oyo State and 10 secondary schools from each Local Government Areas were used. Purposive sampling was used to select two teachers of Basic Science. Students' Basic Science Examination Results conducted by the Ministry of Education [Basic Education Certificate Examination (BECE)] were used for the study. Data were collected using the teacher's questionnaire titled Attitude to Teaching Basic Science Scale (ATBSS) and Students' basic science examination result conducted by the Ministry of Education. The data was analyzed using Non-parametric test (spearman rank), Pearson Product Moment, ANOVA and Multiple regressions. The reliability of this instrument was 0.65 established using Cronbach Alpha. Results showed that there is relationship between teachers' academic qualification, attitude and student academic performance but the relationship between teacher's years of experience and students' academic performance is not significant. It was recommended that Government should ensure that only professionally qualified basic science teachers are employed to teach the subject. Also teachers should be well motivated by the Government and all stakeholders to show a right attitude to teaching for better academic performance of the students.

Keywords: Influence, Qualification, Experience. Attitude, Performance

INTRODUCTION

The success of any teaching and learning process which invariably influence students' academic performance depend on how effective and efficient the teachers are, success of the students in any examination depends largely on qualified and dedicated teacher. In order to achieve these goals, a lot of responsibilities lie with the teacher to execute in day to day activities. They should develop necessary knowledge, skills, abilities and attitude to perform their duties effectively (Kumar and Nath,2005). The teaching and learning process cannot be provided by just anybody, it requires a teacher who plans and delivers the lessons or instruction in such a way that objectives can be achieved. The National Policy of Education states that "No education system can rise above the quality of teachers in the system" {FGN, 2006}.

The teachers are also regarded as the essential catalyst for school improvement. They are the driving forces and main resources in the development and academic growth of the students as they are sources of knowledge and agents of change.

According to Giwa (2002) "Teacher must command respect from the students" this starts from the dressing of the teachers which must be neat and which calls for dignity. No situation should make a teacher become nervous in front of the students. A well-prepared teacher will maintain the personality even when under stress or worse still when the supervisor is around.

Attitude of Teachers

An attitude may be defined as a predisposition to response in a favorable or unfavorable manner with respect to a given attitude objects. It also serves as an index of how we think and feel about people, object and issue in our environment. In addition, they can provide clues for future behavior predicting how we react when encounter the object of our beliefs. Hussain (2004) said that attitudes are likes and dislikes; it is tendency to act toward or against some things. For students' good academic performance, teachers must show positive attitude to teaching, must be interested and fill the students with devouring curiosity to know that is the next steps in connection with the subject area.

Eggen and Kauchak (2001) identified numbers of teachers' attitude that will facilitate a caring and supportive classroom environment. They are enthusiasm, caring, firm democratic, practices to promote students responsibility, use of time for lesson effectively, have established efficient solutions and interact freely with students and providing motivation for them.

Academic Qualification

Ahiauзу and Princewill (2011) stated that teachers who are academically qualified are those that are professional qualified that engaged to carry out instructional process, and have been exposed to a good measure of training in education.

A teacher who is well trained and in command of his/her subject matter will be able to identify the weakness and strengths of his/her learners, thereby making learning and teaching simpler which in turns promote good students academic performance.

In the present educational system is better we staffed our schools with qualified teaches rather than unqualified teachers. In a study of the impact of teachers' performances, Clotfelter, Ladd and Vigor (2006) found that a significant differences exists in the mean performance of students in school staffed with qualified teachers and those school staffed with unqualified teachers.

Teacher's Experience

Experience equips an individual with the necessary knowledge on how to tackle the challenges in a particular field. Teacher experience has a significant effect on pupil performance in both primary and secondary levels. Experience teachers have a richer background of experience draw from and can contribute insight and deep to the course of teaching and learning. Teachers' experience and students performance was that students taught by more experience teachers perform at a higher level, because their teacher have mastered the content and acquired classroom management skills to deal with different type of classroom problems.

Rivers and Sanders (2002) suggests that teachers effectiveness increases dramatically each year during the first ten years of teaching, it is also found that teacher effectiveness improves rapidly over the first three years of teaching and reaches its highest point between third and fifth year but found no substantial improvement after year five.

Statement of the Problem

Declining in student's performance in basic science is a great concern to all stakeholders in education. Since the subject is a prerequisite to all science subjects in senior secondary school, as a result many students have been denied the opportunity of offering pure science because they did not perform well in basic science. Researcher's in their efforts to find out the reasons for students' poor learning outcomes in basic science have examined effects of many variables but do not take cognizance of some psychological constructs that could remotely but effectively affect learning outcomes. Such constructs as attitudes have been shown to have contributed to students' learning outcomes. However, past research studies have focused heavily on interaction in the classroom setting and largely ignored the aspect of teacher's qualification and experience. Equally, previous researches have focused mainly on students' achievement without considering the combination of factors such as attitude, teaching experience and teacher's qualification in a single study.

In the light of the above revelations, this study intends to examine the influence of teachers' qualification, experience and attitude on secondary school students' academic performance in basic science in Oyo State.

Research Questions

1. Is there any significant relationship between teacher's qualification and performance of secondary school students in basic science?
2. Is there any significant relationship between teacher's years of experience and performance of secondary school students in basic science?
3. Is there any significant relationship between teacher's attitude and performance of secondary school students in basic science?

Research Hypothesis

H01; There is no significant difference in the academic performance of students taught by teachers based on academic qualification.

H02; There is no significant difference in the academic performance of students taught by teachers based on teaching experience

H03: There is no significant relationship between teachers experience and attitude, and the academic performance of students in basic science

H04: None of the independent variables (teachers experience and attitude) predict the academic performance of students in basic science.

METHODOLOGY

The research design used in this study was survey research design. The researcher chooses this method because survey research is useful in describing the characteristics of a large population; the research design is used to determine the degree of relationship between the independent variable (teacher's qualification, experience and attitude) and the dependent variable (student's academic performance) in basic science at Junior Secondary School level.

Population

This study comprises of all junior secondary school students and their teachers in Oyo State, Nigeria.

Sample and Sampling Techniques

Oyo state is divided into thirty-three (33) local government council areas (LGA), and multistage sampling was used.

Stage 1; simple random sampling technique was used to select four out of the thirty-three Local Government Area (LGA) in Oyo State.

Stage 2; simple random sampling technique was also employed to select ten secondary schools from each of the four LGA, in all forty secondary schools were used.

Stage 3; purposive sampling was used to select two teachers of basic science because most schools do not have more than two.

Stage 4; purposive sampling was used to select students' basic science examination result conducted by the ministry of education (Basic Education Certificate Examination (BECE)) since the researcher want to study the general performance of students across the state. In all five thousand two hundred and twelve (5,212) students' were used for the study.

Instrumentation

Two research instruments were used for this study. The teacher’s questionnaire titled “ATTITUDE TO TEACHING BASIC SCIENCE SCALE (ATBSS). It contains two sections, section A elicited responses on the following; teacher years of experience and qualification while section B contains 30 items on teacher’s attitude to teaching of basic science. . The response format was as followed: SA = strongly agree, A = Agree, D= Disagree, SD = strongly disagree. The second instrument is the students’ academic performance record from 2015 Basic Education Certificate Examination (BECE,) result. The 2015 BECE results from each sampled school were subjected to the following categorizations: Students with credit pass and above in basic science were regarded as highly/averagely performed students while those with passes and failure in basic science were grouped as poorly performed.

RESULTS PRESENTATION

Presentation of Data

Table 1: Descriptive Statistics of the variables

| | N | Minimum | Maximum | Mean | Std. Deviation |
|-------------------------------------|----|---------|---------|---------|----------------|
| student performance at credit level | 80 | .00 | 100.00 | 63.5218 | 36.93428 |
| AcadQua | 80 | 1.00 | 5.00 | 4.0125 | 1.22726 |
| Attitude of teacher to teaching | 80 | 66.00 | 111.00 | 90.3875 | 10.12641 |
| Year of Teaching Experience | 80 | 3.00 | 28.00 | 10.8500 | 6.46138 |
| Valid N (listwise) | 80 | | | | |

The table above shows the descriptive statistics of the variables. From the table the mean score of students that participated in the research is 63.52. The mean score on the attitudinal scale is 90.39, while the mean score of the academic qualification is 4.01 and that of the year of experience is 10.85

Research Question 1

Is there any relationship between teacher’s qualification and performance of secondary school students in basic science?

Table 2: Correlations between students performance and academic qualification

| | Student performance at credit level | AcadQua |
|--|-------------------------------------|---------|
| Spearman's rho student performance at credit level | 1.000 | .630** |
| Correlation Coefficient | | |
| Sig. (2-tailed) | . | .000 |
| N | 80 | 80 |

Correlation is significant at the 0.01 level (2-tailed).

Table 2 shows the relationship between teachers' academic qualification and students academic performance in basic science is .63 and it is positive.

Research Question 2

Is there any relationship between performance of secondary school students in basic science and teacher's years of experience?

Table 3 Correlations between students performance and year of teaching experience

| | Student performance at credit level | Year of Teaching Experience |
|---|-------------------------------------|-----------------------------|
| Pearson student performance at credit level | 1 | .034 |
| Correlation | | |
| Sig. (2-tailed) | | .763 |
| N | 80 | 80 |

Table 3 shows that there is relationship between teacher's years of experience and students' academic performance and the relationship are positive but weak. This shows that there is a linear relationship between students' performance in basic science and teachers years of teaching experience ($r = 0.034$) and the relationship is not statistically significant $r = 0.034$ and the value of $p = 0.763$ which is > 0.05

Research Question 3

Is there any relationship between students' performance in basic science and teacher's attitude?

Table 4: Correlations between students’ performance in basic science and teachers attitude

| | | student performance at credit level | Attitude of teacher to teaching |
|--|---------------------|-------------------------------------|---------------------------------|
| student performance at credit level | Pearson Correlation | 1 | .346** |
| | Sig. (2-tailed) | | .002 |
| | N | 80 | 80 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

Table 4 shows that there is relationship between the two variables and the relationship are positive. This implies that there is linear relationship between students’ performance in basic science and teacher’s attitude. ($r= 0.346$) and the relationship is statistically significant. $p=0.002$ which is less than 0.05

Research Hypothesis

H₀₁ ; There is no significant difference in the academic performance of students taught by teachers base on academic qualification

Table 5: ANOVA of Students performance at credit level and academic qualification

| | Sum of Squares | Df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 53292.838 | 4 | 13323.210 | 18.343 | .000 |
| Within Groups | 54474.310 | 75 | 726.324 | | |
| Total | 107767.148 | 79 | | | |

Table 5 revealed that the p-value obtained is less than 0.05. The null hypothesis is therefore rejected since $F(4, 75) = 18.343$ $P < 0.05$. The result indicates that there is significant difference between the performances of student taught by teachers based on their academic qualification. The F-value obtained is 18.343 which is large and indicate a large difference in the population mean.

H₀₂ ; There is no significant difference in the academic performance of students taught by teachers base on year of teaching experience

Table 6 ANOVA of students performance at credit level based on year of teaching experience

| | Sum of Squares | Df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | 2998.149 | 4 | 749.537 | .537 | .709 |
| Within Groups | 104768.998 | 75 | 1396.920 | | |
| Total | 107767.148 | 79 | | | |

Table 6 revealed that the p-value obtained is greater than 0.05. The null hypothesis is therefore not rejected since $F(4, 75) = .537$ $P < 0.05$. The result indicates that there is no significant difference between the performances of student taught based on the teacher's experience. The F-value obtained is .537 which is very small and indicates no difference in the population mean of the teachers based on their year of teaching experience.

H₀₃: There is no significant relationship between teacher's years of experience and attitude, and the academic performance of students in basic science.

Table 7 Descriptive Statistics

| | Mean | Std. Deviation | N |
|-------------------------------------|---------|----------------|----|
| student performance at credit level | 63.5217 | 36.93428 | 80 |
| Year of Teaching Experience | 10.8500 | 6.46138 | 80 |
| Attitude of teacher to teaching | 90.3875 | 10.12641 | 80 |

Table 8 Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .346 ^a | .120 | .097 | 35.10084 |

a. Predictors: (Constant), Attitude of teacher to teaching, Year of Teaching Experience

Table 9 ANOVA^a

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|-------|-------------------|
| 1 | Regression | 12897.864 | 2 | 6448.932 | 5.234 | .007 ^b |
| | Residual | 94869.284 | 77 | 1232.069 | | |
| | Total | 107767.148 | 79 | | | |

a. Dependent Variable: student performance at credit level

b. Predictors: (Constant), Attitude of teacher to teaching, Year of Teaching Experience

The model in table 8 revealed the strength of the association/magnitude of the relationship between students' performance in basic science and the three independent variables. (R) is .346. This means that there was a .346 degree of relationship between students' performance in basic science and the two independent variables. The relationship is positive.

The coefficient of determination (R^2) is .120. This shows that 12.0% of the proportion of the total variance of student's scores was shared with the linear combination of the two independent variables.

The adjusted coefficient of multiple determinations (Adjusted R^2) was .097. This means that 9.7% of student performance was the predicted amount of shared variance between the independent variables, but was adjusted mathematically to estimate this value for the population. It is a maximum likelihood estimate of what would be obtained if the entire population was involved instead of the sample population. The standard error of estimate was 35.10084. The standard error of estimate provides a measure of the standard distance between a regression line and the actual data points and indicates how accurate the predictions will be (Smith, 2006).

This shows that 9.7% of the variance was accounted for by all the predictors and this variance/observation is statistically significant. $F(2, 77) = 5.234$ $P < 0.05$

Table 8 shows that there was a significant portion of explained variance in students' performance in basic science. Therefore, the obtained regression equation allowed reliable prediction of students' performance in basic science. The null hypothesis is rejected since the p-value obtained is less than 0.05.

H₀₄: The two independent variables (experience and attitude) does not predict the academic performance of students in basic science

Table 10 Coefficients

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|-------|---------------------------------|------------|---------------------------|------|-------|-------------------------|-------|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -51.020 | 35.757 | | | | |
| | Year of Teaching Experience | .078 | .612 | .014 | .128 | .899 | 1.004 |
| | Attitude of teacher to teaching | 1.258 | .391 | .345 | 3.220 | .002 | 1.004 |

a. Dependent Variable: student performance at credit level

Table 10 reports the standardized beta (β) coefficients which gives a measure of the contribution of each variable to the model in terms of standard deviations. β is the predicted standard deviation (SD) of the dependent (criterion) variable for a change of one (1) SD in the independent (predictor) while controlling for the other predictors. It means that if each of the independent variables increases by one (1) SD, the dependent will increase by the beta values. The F and sig (P) values give a rough indication of the impact of each predictor

variable. A big absolute t value and small P value suggests that a predictor variable is having a large impact on the criterion variable.

The tolerance values are a measure of the correlation between the predictor variables and can vary between 0 and 1. The closer to zero the tolerance value is for a variable, the stronger the relationship between this and the other predictor variables.

V/F is an alternative measure of collinearity (reciprocal of tolerance) in which a large value indicates a strong relationship between predictor variables.

The table shows that academic qualification ($\beta = 1.258$, $t = 3.222$, $P < 0.05$) was the most influential predictor of students' performance. We therefore reject the null hypothesis

Discussion

The results showed that there is relationship between academic qualification and student's performance. Also there is relationship between teacher's attitude and academic performance. But the relationship between teachers' years of experience and academic performance is not significant. The finding revealed that there is relationship between teachers' year of experience and students' academic performance and the relationship are positive but weak which is not statistically significant, although the relationship between teacher experience and student performance is difficult to interpret because the variable is highly affected by market conditions. The result toils the line of other studies on the effect of teacher experience on student learning who found a relationship between teacher's effectiveness and year of experience. Akinfe, Olofiniyi and Fashiku (2012), established that teachers' experience contributes maximally to students' academic performance. According to them, teacher with cognate teaching experience turn out students with relatively higher academic performance. The evidence currently available suggests that while inexperienced teachers are less effective than more senior teachers, the benefits of experience level off after a few years (Rivkin, Hanushek and Kain, 2005).

Rivers and Sanders (2002) suggest that teachers effectiveness increase dramatically each year during the first ten years of teaching, it also find that teachers' effectiveness increase rapidly over the first three years of teaching and reach its highest point between the third and fifth year but find no substantial improvement after the year five. Trend in experience effect is that older teachers do not always continue to grow and learn, many grow tired in their jobs.

The outcome of the study on teacher qualification toils the line of other researchers like Adewuyi and Ogunwuyi (2002) who asserted that “the transmission of knowledge and information from one generation to another requires the service of someone adequately trained and skilled in the area of doing the job”. That person is the teacher, he is the one assigned the responsibility of transmitting to the present generation the accumulated knowledge and value of the past and thus interprets this information with reference to the present with a view to modify and improving the future. Darling-Hammond (2000) asserted that students learn more from teachers with strong academic skills. Middle and high school students learn more from their teachers who hold Bachelor’s or Master’s degree in the subject they teach. It was observed also that the use of unqualified teachers’ in schools affects the quality of learning delivery in the schools.

Findings revealed that the quality of teachers was the most important determinants of Student’s academic performance in secondary schools (Aduwa, 2004).

This study revealed that attitude contributes significantly to students’ performance in basic science. The negative attitudes are major causes of student’s poor performance and that the same effect exists in all other subjects. It could be submitted that positive attitude towards teaching a particular subject might establish the potentials inherent in that subject. When teachers establish positive relationships with their students, it affects the student’s behavior positively in relation to school and this in turn improves their performance. The result was in line with the work of Aduwa (2004), who reported that the way teacher interact with students influences student’s disposition towards school.

Conclusion

Teachers' attitude and educational qualification were the prime predictors of students' academic performance. The basic science teachers have not acquired enough teaching experience that may enable them have enough mastering of the subject. The right attitude of the teachers to the subject brings about the good academic performance of the students.

Recommendations

- (1) The government must ensure that only professionally qualified basic science teachers are employed to teach the subject for better students' academic performance.
- (2) Teachers should be well motivated by the government and all stakeholders for them to show a right attitude to teaching for better academic performance of the students.
- (3) The need for more workshops and seminars organized for basic science teachers for them to update their knowledge and professional skills.
- (4) The teacher should show right attitude to teaching of basic science and be contented with the profession.
- (5) The inspector of school should visit schools more often to monitor and to ensure more seriousness on the part of basic science teachers for greater effectiveness of teaching and better students' academic performance.
- (6) Teachers should be encouraged to embark on regular professional development
- (7) Teachers should bring their wealth of experience in teaching to the level of the students' aptitude to make classroom interactions more interesting so as to encourage the interest of the students to academic excellence.
- (8) School principals should endeavour to make necessary instructional materials available to teachers when needed. The staffrooms should also be conducive for teachers to adequately prepare their lessons. This can motivate teacher to do better in their interaction with students.
- (9) Government should pay the teacher salary and incentive regularly and promptly so as to encourage the right altitude to work, because an hungry dog is an angry dog.
- (10) The government should intensify its effort at training more Basic Science teachers.
- (11) Training in service programmes for incumbent unqualified Basic Science teachers for better students academic performance in Basic Science.
- (12) Re-training programmes should be regular for both qualified and unqualified teacher to enable them to be current with changing society.

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