

# TEACHER-RELATED VARIABLES AND THEIR JOB PRODUCTIVITY IN SELECTED SECONDARY SCHOOLS IN KADUNA STATE, NIGERIA

By

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## ABSTRACT

*The research examined the influence of teacher-related variables and their job productivity in selected secondary schools in Kaduna State, Nigeria. The study adopts the survey research design. In this kind of research, this design is considered most appropriate here because it is a design used for collecting large and small samples from a population to examine the distribution indices and educational implications. The population of this study comprised 2567 teachers in 31 public secondary schools in the study area. Stratified random sampling techniques were adopted in selecting the schools used for the study. The sample for the study was 256 (10%) teachers randomly drawn for the study. The instrument for data collection was the researcher's developed instrument titled Teacher-Related Variables and job productivity questionnaire (TRVJPQ) divided into three sections (A, B, and C). Section A contains items on respondents' data, section B contains 15 items ( five each for the levels of teachers-related variables and was designed using a four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD). While section c was made of 20 items on teachers' job productivity. The validity was ascertained with three (3) experts in educational management educational and educational Measurement and Evaluation to assess the instrument. Corrections were appropriately effected and the final screening of the instrument was carried and the final draft was made and used for data collection of the study. The Cronbach Alpha reliability method was used to test the reliability of the instrument. And a trial test was conducted consisting of 30 respondents from other secondary schools who were not part of the final study and the coefficient of internal consistency ranged from .77 to .83. The data for this study was analysed with descriptive (mean and standard deviation) and inferential simple linear regression analysis. The findings revealed that teachers' experience, use of instructional materials, and teachers' personality significantly predict job productivity. It was recommended among others that the school management should provide instructional materials for teachers thus, it will enhance the teachers in the teaching and promote the academic performance of students.*

**Keywords:** *Teacher, Related Variables, Job and Productivity*

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## INTRODUCTION

The role of teachers in the educational environment cannot be undermined. This is because of the indispensable role of the teacher in the learning process. The learner sees the teacher as a role model and will purely obey his/her instruction to the latter. Ignoring the place of the teacher may pose dangers on the part of the learner. Thus, it is no gainsaying that quality education cannot reshape society and eliminate inequality, create a country's human resources, and generate opportunities for social and economic development if the learners do not acquire the

requisite skills stipulated by the school programmes through the instructional objectives. The teacher uses achievement tests to ensure that these skills have been acquired. Without the test and the teacher, education is meaningless. **In the words of** Wright, Horn and Sanders (1997) the most important factor influencing student learning is the teacher. Thus, the teacher has a great influence on student's academic achievement. Teachers stand in the interface of the transmission of knowledge, values and skills in the learning process. If the teacher is ineffective, students under the teacher's tutelage will achieve inadequate progress academically (Kimani, Kara, & Njagi, 2013) and this is regardless of how similar or different the students are in terms of individual potential in academic achievement.

An empirical study by Owolabi and Adedayo (2012) sought to examine the effect of teachers' qualifications on the performance of Senior Secondary School students in Physics. The purpose was to determine whether the status of the teacher has any impact on the performance of the students in Physics. The survey type of descriptive research design was adopted. The sample for the study consisted of 100 Senior Secondary Schools Physics students in Ekiti State and the teachers that prepared and presented the students in each school for the 2009/2010 West African School Certificate Examination. The year's result summary for each school was collated with the bio-data of their respective Physics teachers. Four hypotheses were postulated and tested at a 0.05 significance level. The data collated were analysed using inferential statistics. The results revealed that students taught by teachers with higher qualifications performed better than those taught by teachers with lower qualifications. It was also shown that students performed better in physics when taught by professional teachers. The result also showed that a teacher's gender does not affect their ability to impart knowledge to the students, much as he/she is a skilled teacher in that field of study. However, the experience of the teacher is significant in impacting the student's academic performance in Physics. Based on the findings, it was recommended that experienced teachers with professional qualifications at higher levels should teach Physics in the certificate class.

Also, Lawal (2021) study examines the effects of teachers' academic qualifications and experience on students' achievement and interest in Accounting. The sample was made up of two hundred and twenty (201) NCE II, Business Education Department, Federal College of Education, Zaria and ten (10) Accounting lecturers in the Department. One hundred and forty (140) students of NCE II in the Business Education Department and seven (7) Accounting lecturers were selected from Business Education Department, using a random sampling technique. Two research hypotheses guided this study, the research hypotheses were tested using regression analysis and ANOVA. The findings from the study revealed that all lecturers' academic qualifications and experience when taken together made significant effects on students' achievement in Accounting. Based on the findings of this study, the recommendations are also given by the researchers.

Again, Filgona and Sakiyo (2020) determine the degree to which teachers' academic qualification predicts students' attitude and academic achievement in Geography in senior secondary schools of Adamawa State. The research design employed was the predictive correlational design. The study, which sampled 400 teachers and 400 students from senior secondary schools in Adamawa State, employed the multistage sampling technique to actualize this. The result found that students' attitude to Geography was not predicted by teachers' qualifications.

Visual materials are those materials that appeal to the sense of sight for learning. They include models, charts, diagrams flat pictures, and boards among others. Inyang-Abia (1988) explains how visuals aid students' achievement in an introductory technology session and asserts that visuals arose and retain an interest in what is presented or learned. They help to speed up the learning process better than long-world descriptions. In business studies, visuals can easily explore the past experiences and the historical past of a community.

More so, Tety (2016) examined the extent to which the selected community secondary schools in Rombo District utilize quality and adequate instructional materials in classrooms and how this has promoted the academic performance of students. This research was based on three objectives including: to explore the views of teachers and students on the extent to which instructional facilities affect student performance, to examine the challenges that teachers in community secondary schools face in accessing instructional materials and to assess the strategies that teachers use to minimize the challenges of attaining and using quality instructional materials. The study adopted a cross-sectional survey design. The study population involved all community secondary schools in Rombo district. Out of 38 community secondary schools in Rombo district 5 schools were randomly selected for data collection. In each school, 5 teachers and 20 students filled semi-structured questionnaire. Also, the heads of each school and 1 secondary district education officer were interviewed. The following were the findings of the study: first, instructional materials are the key to teachers' and students' performance. Secondly, most community secondary schools in Rombo District suffer a shortage of essential teaching and learning materials. Thirdly, the study revealed that teachers used different strategies to minimize the challenges of attaining and using quality instructional materials. The study recommends that the government should budget sufficient funds for improving the availability

of instructional materials in all secondary schools. For further research, this study proposes that aspects of how teachers and students use instructional materials for effective teaching and learning processes need to be examined.

In addition, Chonjo's study was one of its kind in Tanzania which directly linked the role of physical facilities with students' academic performance in primary schools. However, Chonjo focused only on physical facilities, leaving out instructional materials. To me, physical facilities such as buildings including classrooms, chairs and desks are not enough to provide quality teaching and learning. Instructional 20 materials are also necessary.

Kenni (2020) study investigated the influence of teacher personality on the academic achievement of chemistry students in Ekiti State, Nigeria. The research design used was a survey design of the descriptive type of research. The sample size of two hundred (200) respondents was sampled for the study using a simple random sampling technique to select public secondary schools across Ado, Ikole and Ikere Local Government Areas of Ekiti State. The respondents were drawn from fifty selected secondary schools with two chemistry teachers being selected from each school. The instrument for data collection for the study was a self-structured questionnaire. The split-half method of reliability was used to ascertain the reliability of the instrument using Spearman-Brown's form Pearson Product Moment Correlation statistical analysis. A coefficient of 0.99 was obtained. Frequency counts and percentages were used to analyse the demographic characteristics of respondents to answer the research questions while the hypotheses were tested using inferential statistics of Correlation statistical analysis. The findings of the study showed that there was a significant positive correlation between teachers' attitudes and academic achievement of chemistry students; there was a significant positive correlation between teachers' method and academic achievement of chemistry students; there was a significant positive correlation between teachers' experience and academic achievement of chemistry students; and there was a significant positive correlation between teachers' classroom management and academic achievement of chemistry students. Based on the findings of the study, appropriate recommendations were made

In the study carried out by Mode (2009) on teacher's salaries and commitment to jobs 235 teachers were sampled and a person's product coefficient analysis was used in testing this hypothesis. The result of the study was found to have a positive relationship between money and employee effectiveness and efficiency in work organization. He concluded that even though some researchers assumed that money (salary) was not what most people looked for or worked for, it was evident that employees considered self-esteem and self-actualization as their major goals in the ground to work.

Another empirical study by Adamu (2019) studies "Teachers' fringe benefits, teachers' professional development as a correlate of teachers' job performance in Senior Secondary Schools in Adamawa State". The purpose of this study is to determine the teacher' fringe benefits, and teachers' professional development as a correlate of teachers' job performance in Senior Secondary Schools in Adamawa State, two research questions and two hypotheses guided the study. The study adopted a correlational survey design. The area of the study was Adamawa state, the population was 337 principals and 5128 teachers. A stratified simple random sampling technique was used to select two education zones out of five and a sample of 166 principals and 166 teachers was determined using Taro Yamane's formula. The instrument was a questionnaire developed by the researcher for the study on teachers' fringe benefits, teachers' professional development for teachers' determination questionnaire (TFTPDTDQ), and teachers' job performance questionnaire (TJPQ). The instrument was validated by 3 experts in the Physical Sciences Education Department, School of Technology and Science Education Modibbo Adama University of Technology, Yola. The questionnaire was subjected to a pilot study conducted in 6 senior secondary schools in Adamawa State and the reliability coefficient was 0.94 and 0.92 using Cronbach's alpha method. The data was collected with the help of four research assistants within the period of 4 weeks. The data were analysed using mean and standard deviation for research questions and the null hypotheses were tested using Pearson Product Moment Correlation Coefficient (PPMCC). Findings indicated that there were significant relationships between teachers' fringe benefits, teachers' professional development and teachers' job performance in senior secondary schools in Adamawa state. The study concluded that there is a significant relationship between teachers' fringe benefits, teachers' professional development and teachers' job performance and recommendations among others including giving teachers surprise packages and sending them on training programmes.

Finally, Dinensio, Anumaka, Tamale and Mugizi (2021) study investigated the relationship between remuneration and job performance of teachers in government-aided secondary schools in Western Uganda. Remuneration was studied in terms of basic pay, income security schemes, and bonuses and allowances. Teachers' job performance was considered in terms of classroom teaching, management of students, discipline and regularity and interpersonal relations. The study adopted a cross-sectional research design using the quantitative approach on a sample of 333 teachers. Data were collected using a questionnaire. Descriptive results revealed that the job

performance of teachers was high and remuneration moderate. Inferential analysis showed that while income security schemes had a positive and significant influence on teachers' job performance, basic pay had a positive but insignificant influence on teachers' job performance, and bonuses and allowances had a negative insignificant influence on teachers' job performance. It was concluded that low remuneration to teachers impedes high job performance, especially when basic pay is low and there is a lack of bonuses and allowances. The existence of income security schemes increases job productivity. Therefore, it was recommended that stakeholders involved in the management of schools such as the Government, head teachers, and Boards of governors, devise means of enhancing the remuneration of teachers. Teachers should be given bonuses for exceeding performance and allowances when they do extra work. The pension plan and social welfare benefits should also be made attractive to increase the job performance of teachers.

### **Statement of the problem**

The problem of being job productive among teachers has long been a serious issue in academia and other related field of study. This is because productivity is a veritable tool for Academic Excellence and organizational growth. Personal interaction with most teachers has revealed that they are not being productive in their jobs. The study has also revealed that most teachers lack the skills of effective teaching which may result in low productivity in the organization. In recent times, the previous governor of Kaduna state Nasir EL-Rufai in 2017 and 2018 laid some teachers off due to the decline in students' performance resulting from poor productivity. This has greatly affected the overall image of the institution. A series of blames has been poured both on the side of the teachers, who are being blamed for ineffectiveness in terms of their classroom pedagogy (teaching skills). Teachers have also shifted the blame to the government which has not lived up to their expectations in ensuring the needs of the teachers are made available. The end product is the students who are half-baked due to the poor productivity of the teachers. This series of blame from all quarters will persist if a study is not conducted on teacher-related variables and their productivity in selected secondary schools in Kaduna State, Nigeria. An attempt to embark on this study constitutes the central problem for this research undertaking.

### **Purpose of the study**

The main purpose of the study was to examine teacher-related variables and their productivity in selected secondary schools in Kaduna State, Nigeria. Specifically, the study is aimed at the following objectives:

1. To investigate how teachers' teaching experience predicts their job productivity?
2. Find out how teachers' instructional delivery predicts their job productivity?
3. Determine if teachers' personality predict their job productivity?

### **Research questions**

The following research questions were formulated to serve as a guide to this study.

1. To what extent does a teacher's experience predict their job productivity?
2. To what extent do instructional materials predict their job productivity?
3. How does teacher personality predict their job productivity?

### **Statement of hypotheses**

The following statistical hypotheses were formulated to guide the study

1. Teachers' experience does not significantly predict their job productivity.
2. Teachers' use of instructional materials does not significantly predict their job productivity.
3. Teacher personality does not significantly predict job productivity.

### **RESEARCH METHODS**

The study adopts the survey research design. In this kind of research, this design is considered most appropriate here because it is a design used for collecting large and small samples from a population to examine the distribution indices and educational implications. The population of this study comprised 2567 teachers in 31 public

secondary schools in the study area. Stratified random sampling techniques were adopted in selecting the schools used for the study. The sample for the study was 256 (10%) teachers randomly drawn for the study. The instrument for data collection was the researcher's developed instrument titled Teacher-Related Variables and job productivity questionnaire (TRVJPQ) divided into three sections (A, B and C). Section A contains items on respondents' data, section B contains 15 items ( five each for the levels of teachers-related variables and was designed using a four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD). While section c was made of 20 items on teacher job productivity. The validity was ascertained with three (3) experts in educational management educational and educational Measurement and Evaluation to assess the instrument. Corrections were appropriately effected and the final screening of the instrument was carried and the final draft was made and used for data collection of the study. The Cronbach Alpha reliability method was used to test the reliability of the instrument. And a trial test was conducted consisting of 30 respondents from other secondary schools who were not part of the final study and the coefficient of internal consistency ranged from .77 to .83. The data for this study was analysed with descriptive (mean and standard deviation) and inferential simple linear regression analysis.

### Hypothesis-by-hypothesis presentation of results

The data for this study were analysed hypothesis-by-hypothesis as presented below

#### Hypothesis one

Teachers' experience does not significantly predict their job productivity. The major independent variable in this hypothesis is the teacher's experience while the dependent variable is job productivity. To test this hypothesis, a simple regression analysis was employed and the result is presented in Table 1.

Table 1  
Results of Job Productivity on Teachers' Experience

	R	R Square	Adjusted R Square	Std. Error of the Estimate		
	.909 <sup>a</sup>	.826	.825	1.82975		
Sources of variation	Sum of Squares	df	Mean Square	F-value	p-value	
Regression	4056.246	1	4056.246	1211.546	.000 <sup>b</sup>	
Residual	853.738	255	3.348			
Total	4909.984	256				

  

Variables	B	Std. Error	Beta	t	p-value
(Constant)		2.865	.422		.002
Teacher's experience		.854	.025	.909	.000

\*p<.05

Table 1 revealed that the p-value of .000 associated with the computed F-value (1211.546) is less than the chosen alpha of 0.05. Hence, the null hypothesis is rejected. This implies that there is no significant relationship between a teacher's experience and job effectiveness. The R-square of .826 means 83 % of the variance in the criterion variable was accounted for by the predictive variable (teachers' experience). To test the significance of the combination of both the regression constant (2.86) and the regression coefficient (.422) to the prediction of a teacher's experience, a t-test analysis was executed and the result indicates that the p-value was found to be .001. The mathematical relationship of the regression model is depicted by the following equation  $y=2.865+.442x$  where y= job productivity and x is the teachers experience

#### Hypothesis two

Teachers' use of instructional materials does not significantly predict their job productivity. The major independent variable in this hypothesis availability of instructional materials while the dependent variable is job productivity. To test this hypothesis, the ordinal simple regression analysis was employed and the result is presented in Table 2.

Table 3  
Results of job productivity on Teachers' Use of instructional materials

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.096 <sup>a</sup>	.047	.005	4.36773		
Sources of variation	Sum of Squares	df	Mean Square	F-value	p-value
Regression	45.328	1	1145.328	102.376	.024 <sup>b</sup>
Residual	4864.656	255	19.077		
Total	4909.984	256			
Variables	B	Std. Error	Beta	t	p-value
(Constant)	19.131	.435		13.529	.000
Use of instructional materials	-.144	.094	-.096	-1.541	.124

\*p<.05

Table 2 revealed that the p-value of .024 associated with the computed F-value (102.376) is less than the chosen alpha of 0.05. Hence, the null hypothesis is rejected. This implies that teachers' use of instructional materials does significantly predict their job productivity. The R-square of .047 means 4.7 % of the variance in the criterion variable was accounted for by the predictive variable (use of instructional materials). To test the significance of the combination of both the regression constant (19.131) and the regression coefficient (.445) to the prediction of the use of instructional materials, a t-test analysis was executed and the result as shown in Table 3 indicates that both variables (job productivity and use of instructional materials) are significantly related. The mathematical relationship of the regression model is depicted by the following equation  $y=19.131+.435x$  where  $y=$  job productivity and  $x$  is the use of instructional materials.

### Hypothesis three

Teacher personality does not significantly predict job productivity. The major independent variable in this hypothesis is the teacher's personality while the dependent variable is job productivity. To test this hypothesis, a simple regression analysis was employed and the result is presented in Table 3.

Table 3  
Results of job productivity and Teacher's Personality

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.133 <sup>a</sup>	.018	.014	4.34888		
Sources of variation	Sum of Squares	df	Mean Square	F-value	p-value
Regression	87.237	1	87.237	4.613	.033 <sup>b</sup>
Residual	4822.748	255	18.913		
Total	4909.984	256			
	B	Std. Error	Beta	t	p-value.
(Constant)	14.285	1.289		11.079	.000
Teacher's personality	.174	.081	.133	2.148	.033

\*p<.05

Table 3 revealed that the p-value of .033 associated with the computed F-value (4.613) is less than the chosen alpha of 0.05. Hence, the null hypothesis is rejected. This implies that there is a significant positive relationship between teacher's personality and their job productivity. The R-square of .018 means 18 % of the variance in the criterion variable was accounted for by the predictor variable (teacher's personality). To test the significance of the

combination of both the regression constant (14.285) and the regression coefficient (1.289) to the prediction of the teacher's personality, a t-test analysis was executed and the result as shown in Table 3 indicates that both variables (teacher's personality and job productivity) are significantly related. The mathematical relationship of the regression model is depicted by the following equation  $y=14.285 + 1.289x$  where  $y=$  job productivity and  $x$  is the teacher's personality.

## DISCUSSION OF FINDINGS

### Teacher's experience and job productivity.

The findings revealed that there is a significant relationship between teachers' experience and job productivity. This indicates that there is a significant relationship between teachers' experiences. The finding of this hypothesis is to the earlier position of Ikpaye (2004) that the degree to which teachers succeed in bringing about desired changes in students' behavior depends on the methods, techniques, technology and other devices they employ in teaching.

### Use of instructional materials and job productivity.

The results of hypothesis two revealed that there is a significant relationship between the use of instructional materials and teachers' job productivity. Findings show that the hypothesis was rejected. The result of this analysis revealed that there is a significant relationship between the availability of instructional materials and job productivity. This agrees with the findings of Bukoye (2019), which opines that instructional materials are valuable assets in different learning situations because they make lessons practical and realistic. They spur better understanding and improve the learning process.

### Teachers' Personality and job productivity

The third hypothesis revealed that teachers' personality significantly predicts job productivity. Thus the teachers' personality at work determines the quality of work that is accomplished. Also supported by the findings of this hypothesis is the position of Taiwo (2002) that teachers' attitude has a great influence on teachers' teaching efficiency as well as their job productivity.

## SUMMARY

The result from data gathered to check the impact of school-related variables and the quality of academic outcomes. The analysis revealed a significant correlation between teacher quality, classroom ergonometic and student learning outcomes. Hence there is a need for improvement in the school environment climate, especially classroom designs and atmosphere. The appropriate authorities in charge of education at both state and national levels should recognize the importance of teachers in society. Hence recruitment into teaching positions should be on merit and for those with the qualification. Also, those who are to be given any role in government, such as that of minister for education or commissioner for education, should have had classroom experience. Based on the results obtained from the analysis, major findings are summarized thus;

1. Teachers' experience does significantly predict their job productivity.
2. Teachers' use of instructional materials does significantly predict their job productivity.
3. Teacher personality does significantly predict job productivity.

## RECOMMENDATION

The following recommendations were drawn from the study

1. The school management should provide instructional materials for teachers. This will help to facilitate the teachers' teaching effectiveness.
2. Teachers should show a positive personality and attitude to work which has a lasting end on the academic performance of students.
3. There should be motivation on the part of the government in terms of prompt payment of salary and academic performance of students.

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