

Teachers` Motivation on Students` Performance in Mathematics in Government Secondary Schools, Makurdi Lg Area

Adeyemo Adeyinka R¹ Oladipupo Asabi², Omisore Adedotun O³

¹(Demography and Social Statistics Department, Obafemi Awolowo University
Ile-Ife, Osun-State, Nigeria)

^{2*3}(Department of Mathematics and Statistics, Osun-State polytechnic,
Iree Osun-State, Nigeria)

ABSTRACT: *One of the important factors in realizing educational objectives in mathematics as a subject is the role of the teachers` motivation within the educational set up. The negative performance of student towards an educational aims and objectives could be associated to the low motivation of teachers most especially in the area of mathematics. The general objective of this study is to examine the effect of teachers` motivation on students` performance in mathematics. This study adopted both descriptive research design, the research design in this study used an ex post factor research design. The study population comprised of the teachers in four different government schools in Makurdi local government area Makurdi. The study used a self-administered questionnaire to collect data from 100 teachers who were selected by the use of simple random sampling while the four schools were selected through purposive sampling. The study results revealed that majority of the teachers (61.0%) under study are not satisfied with their condition of service. Three quarter of teachers (75.0%) under study are not satisfied with the fringe benefits attached to their salaries while majority of the respondents (66.0%) are not satisfied with the condition of service of teachers. It was observed that the condition of service of teachers, teachers` Fringe benefit payment, and teachers` promotion of in-service training have a direct influence on the student`s performance in mathematics.*

Keyword: *Motivation; Performance; Students; Teachers.*

I. INTRODUCTION

Education is a fundamental human right [8] and the key to sustainable development, peace and stability within and among countries is the provision of education to the populace of such countries. The learning environment and teachers` motivation upon knowledge development relatively need attention in the field of mathematics teaching and learning. What happens in the classroom between psychological implication of teachers concerning their motivation and the student ability to study well has an impact on students` opportunity to learn. The activities in the classroom, the repeated actions in which students and teachers engage as they learn are important because they constitute the knowledge that is produced [2]. Availability of teaching/learning resources and teachers` motivation enhances the effectiveness of schools as these are basic things that can bring about good academic performance in the students. The educational effort that will be helpful in developing human resources needed is not given much attention. In particular, low quality education in mathematics is an urgent issue to be addressed. Maicibi opined that all institutions or organization are made up of human beings (workers) and other non-human resources [3]. He further asserts that when the right quantity and quality of human resources is brought together, it can manipulate other resources towards realizing institutional goals and objectives. Consequently, every institution should strive to attract and retain the best of human resource. The implication of these opinions is that well trained and motivated teachers in mathematics if well deployed to the secondary schools will bring about well rounded students who will perform academically well in mathematics. Most teachers are trained and have clear goals to guide their teaching, but good motivations for the teachers and teaching/learning materials seem to be inadequate. As a result, there has been a public outcry about poor performance in Mathematics at secondary school level.

In Nigeria, Mathematics is a compulsory subject up to secondary school level. During the last couple of years, performance in Mathematics in National examination has dropped significantly and this has been a major concern for the society. The West Africa Examination Council has continued to raise concerns over the poor performance in Senior Secondary Certificate Examination. Many teachers have left teaching in public schools for greener pastures in better paying private schools as a result of lack of motivation and incentives needed. Students in most public schools are disadvantaged in that the classes are overcrowded and they do not have adequate learning facilities. In some instances, they lack adequate textbooks and laboratory equipments. As a

result, the students may lose hope in performing well in academic work. This is in sharp contrast to private schools where the numbers of students are few as there are adequate facilities and the teachers are willing to go an extra mile to ensure that the students perform well in examination but the willingness to go an extra mile to ensure good students performance may be frustrated when there is motivation and encouragement to the side of the teachers. Although, it is believed that the reward for the teachers is in heaven, but there is no doubt about the fact that if the limited or no motivation for the teachers in terms of incentives and innovation may drastically reduce their morale which may in turn have a negative impact on student performance in mathematics. The few teachers on the government payroll are poorly remunerated as a result most of them take up part time employment or private business enterprise in order to make ends means. This greatly reduces their commitment to the teaching of Mathematics (which demands for sacrifice). However, lack of motivations for the teachers may influence their dedication to teaching work. Poor performance of student in mathematics may also be as a result of teachers not being dedicated to their duties which may in turn have effects on student academic goal setting which apace affect individual who has set lower goals for themselves.

II. STATEMENT OF THE PROBLEM

One of the important factors in realizing educational aims and objectives in mathematics as a subject is the role of the teachers` motivation within the educational set up. The performance of the student towards achieving educational goals is said to be very important in most society today. The negative performance of student towards an educational aims and objectives could be associated to the low motivation of teachers most especially in the area of mathematics. It is generally believed that children from high and middle socio-economic status parent are better exposed to a learning environment at home because of provision and availability for extra learning facilities and attended a private school while children from a very low socio-economic status family will attend a public school and may not have any opportunity to expose to a better learning environment where teachers are highly motivated. Teachers have the biggest impact on the success and flaws of students` academic performance because their teaching motivations are instrumental in helping them learn and one approach is likely to produce different results from another.

Teachers` motivation to undertake a task depends on their expected reward. Efficient teaching and moral will take place when there is strong motivation in terms of wages and innovation from both employers, also the students` performance in mathematics sometimes may serve as a motivation for the teachers in other to perform efficient in the subject. This motivation may be aroused by either extrinsic or intrinsic stimuli both of which are important in directing and regulating the learner`s behaviour towards attainment of the desired goals. Teachers must therefore be motivated through various ways which may include the organisation of seminars and workshops, upgrading test, performance appraisal, timely payment of salary and wage, providing the required physical facilities like laboratories and verbal encouragements for student etc. This would go a long way in motivating the teachers which will in turn improving the students` performance in mathematics.

III. RESEARCH QUESTION

This study seeks to find answer to the following question:

- (a) To what extent does the condition of service of teachers affect the students` academic performance in mathematics?
- (b) Does teachers` fringe benefit payment have influence on academics performance of the student in mathematics?
- (c) To what extent does the teachers` promotion of in-service training affect teachers` performance?

IV. OBJECTIVES OF THE STUDY

The general objective of this study is to examine the effect teachers` motivation on students` performance in mathematics in Makurdi local government area, Benue state.

The specific objectives of this study are to:

- (a) examine the influence of the condition of service of teachers on student`s performance in mathematics.
- (b) investigate the impact of teachers` fringe benefit payment on student`s performance in mathematics.
- (c) examine if there is a significant effect between teachers` promotion of in-service training and student`s academic performance in mathematics.

V. SIGNIFICANCE OF THE STUDY

This study will help both government and private school board to understand the influence of teachers` motivation on student academic performance especially in mathematics. It would also enable teachers to structure students` education to make them more effective in helping to improving the efficiency of their academic performance. It would be a source of information on how teachers can engage in productive means to ensure the meaningful performance in mathematics. This study would also serve as a tool to clarify issues as to

whether teachers` motivation have any influence on student performance in mathematics and to make recommendations on how school systems can ameliorate the situation.

VI. RESEARCH HYPOTHESES

The hypotheses for this study were:

- (a) There is no significant effect between the condition of service of teachers and student`s performance in mathematics.
- (b) There is no significant effect between teachers` fringe benefit payment and student`s performance in mathematics.
- (c) There is no significant effect between the teachers` promotion of in-service training and student`s performance in mathematics.

VII. METHODOLOGY

Research Design

This study adopted both descriptive research design, the research design in this study used an ex post factor research design. It helps in evaluating the influence of teachers` motivation on students` performance in mathematics; the independent variable is teachers` motivations while the dependent variable is the students` performance in mathematics.

Study Population and Sample Size and Sample Selection Procedure

The study population comprised of the teachers in Government Secondary School Nigerian Air Force Base, Government Day Secondary School, Government Secondary School North Bank and Government Model College Makurdi local government area Makurdi. Teachers were selected because they are directly concerned with the academic performance of students and they know the extent at which they have been motivated by the employer or the government. The four government secondary schools used were selected through the use of purposive sampling method while 100 teachers used were selected by the use of simple random sampling. Simple random sampling was used because the study intended to select a representative without bias from the accessible population. This ensured that each member of the target population had an equal and independent chance of being included in the sample.

Instrumentation-Questionnaire

A three section questionnaire has used to collect relevant data. Section A contained information on socio- demographic data, Section B consist of items that to measure the teachers` motivation and section C, covers percentage of general students` performance in mathematics. The questionnaire was self designed. The questionnaire was administered on a one on one basis. The researcher distributed the questionnaire to the teachers and they were collected from them after completion.

Method of data collection

The study used a self-administered questionnaire and semi structured instruments to collect data from teachers. McMillan and Schumacher recommend a questionnaire if the researcher knows that the respondents will be in position to answer the questionnaire [4]. Closed ended and scaled items were carefully used because to generate information of influence, facilitates response since the questions are multiple choices and data can be categorized easily. The scaled items, according to Macmillan and Schumacher [4] allow fairly accurate assessments of opinions.

Ethical Consideration

The most probable problems in the study were privacy and confidentiality of the respondents. Many teachers were at first uncomfortable to release information on particular aspects like their satisfaction of employer motivation. However the respondents were assured of the confidentiality of their responses by the researcher and eventually responded.

Method of Data Analysis

For proper understanding and evaluation of research questions raised and to ultimately achieve the research objectives, different techniques of analysis were employed. Majorly, the techniques of analysis used were Univariate and Bivariate level of analysis. The descriptive statistics such as frequency and percentage distributions were used to summarize socio-demographic variables of the respondents and respondents response on teachers` motivation while One-way ANOVA was used as a the inferential statistics adopted as a result of the fact that all the independent variables in this study are categorical variable while the dependent variable is a numerical variable and this make analysis of variance the most appropriate statistic to used.

VIII. RESULT

The table I below shows the background information of the respondents, it can be seen that 60% of the respondent are male while the remaining 40% of the respondents are female. It can also be seen that the majority (67.0 percent) of the respondents interviewed are Christians which implies that Christians is the religion with the highest frequency followed by Islam which account for 29.0 percent of the respondent interviewed while other religion is the religion with the lowest percentage of which accounted for 4 percent of the total respondent interviewed. Also, respondents in the age of 35–39 range has the higher percentage than those of other ages, their percentage was 43.0% while the remaining ages shared 57% among themselves. Respondents in age group 45 and above have the lowest percentage of 2% followed by age 30-34 age range with 29.0%.

Concurrently, the table shows that more than two third of the respondent are Tiv (60.0%) followed by those respondent who are Igbo which accounted for 19.0% while those respondent that are Yoruba have the lowest percentage of 3.0%.

Table I: The Background Characteristics Of The Respondents		
Variables	Frequency	Percent
Sex		
Male	60	60.0
Female	40	40.0
Total	100	100.0
Religion		
Islamic	29	29.0
Christianity	67	67.0
Others	4	4.0
Total	100	100.0
Age		
30 – 34	29	29.0
35 – 39	43	43.0
40 – 44	26	26.0
45+	2	2.0
Total	100	100.0
Ethnicity		
Tiv	60	60.0
Igbo	19	19.0
Yoruba	18	18.0
Idoma	3	3.0
Total	100	100.0

Source: fieldwork 2012

Table II shows responses of the teachers on the teachers` conditions of service. From the table above, majority of the respondents (61.0%) disagree with the items statement, this responses revealed that majority of the teachers interviewed are not satisfied with their present salary, the system of payment, time of payment, their future plans and needs regularity of paying the annual increment, the study leave with pay and the encouragement received for in-service training. Therefore, the majority of the teachers under study are not satisfied with their condition of service.

More so, the table also reveal that majority of the respondents (75.0%) disagree with the items statement, this responses revealed that majority of the teachers interviewed are not satisfied with the allowance attached to their salaries, their bonus and transport allowance when on transfer. It is glaring therefore, from the above that, majority of teachers under study are not satisfied with the fringe benefits attached to their salaries. Finally, the table below shows that majority of the respondents (66.0%) disagree with the items statement, this responses revealed that majority of the teachers interviewed are not satisfied with the condition of service of teachers, professional training, seminars, workshop, conferences and the selection procedures for special assignment during seminar and workshops. It is glaring from the above table that majority of teachers under study are not satisfied with the condition of service of teachers.

Table II: Percentage Distribution Of Respondents Response On Teachers` Motivation		
Variables	Frequency	Percent
Condition of service of teacher		
Agree	39	39.0
Disagree	61	61.0
Total	100	100.0
Fringe benefit payment		
Agree	25	25.0
Disagree	75	75.0
Total	100	100.0
Condition of service of teachers		
Agree	34	34.0
Disagree	66	66.0
Total	100	100.0

Source: fieldwork 2012.

HYPOTHESIS ONE: *There is no significant effect between the condition of service of teachers and student`s performance in mathematics.*

Table III: Anova Showing The Effect Of The Condition Of Service Of Teachers On Students` Academic Performance In Mathematics

ANOVA					
Students` Academic Performance in mathematics					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	212.996	1	212.996	10.245	0.002
Within Groups	2037.364	98	20.789		
Total	2250.360	99			

Source: fieldwork 2012.

***sig-value < 0.005

Decision rule: The F statistic model for the condition of service of teachers as shown from the table III is 10.245 with the sig value is 0.002. Since the significant value (0.002) is less than the calculated F-value which is 10.245, we reject the null hypothesis and accept the alternate hypothesis which stated that there is a significant effect between the condition of service of teachers and students` academic performance in mathematics.

HYPOTHESIS TWO: *There is no significant effect between teachers` Fringe benefit payment and student`s performance in mathematics.*

Table Iv: Anova Showing The Effect Of Teachers` Fringe Benefit Payment On Students` Academic Performance In Mathematics

ANOVA					
Students` Academic Performance in mathematics					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	224.250	1	224.250	10.847	0.001
Within Groups	2026.110	98	20.675		
Total	2250.360	99			

Source: fieldwork 2012.

***sig-value < 0.005

Decision rule: The F statistic model for the teachers` fringe benefit payment as shown from the table IV is 10.847 with the sig value is 0.001. Since the significant value (0.002) is less than the calculated F-value which is 10.847, we reject the null hypothesis and accept the alternate hypothesis which stated that there is a significant effect between the teachers` fringe benefit payment and students` academic performance in mathematics.

HYPOTHESIS THREE: *There is no significant effect between promotion of in-service training and student`s performance in mathematics.*

Table V: Anova Showing The Effect Of The Teachers` Promotion Of In-Service Training On Students` Academic Performance In Mathematics

ANOVA					
Students` Academic Performance in mathematics					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	138.708	1	138.708	6.437	0.013
Within Groups	2111.652	98	21.547		
Total	2250.360	99			

Source: fieldwork 2012.

***sig-value < 0.005

Decision rule: The F statistic model for the teachers` promotion of in-service training as shown from the table V is 6.437 with the sig value is 0.013. Since the significant value (0.002) is less than the calculated F-value which is 6.437, we reject the null hypothesis and accept the alternate hypothesis which stated that there is a significant effect between the teachers` promotion of in-service training and student`s academic performance in mathematics.

IX. DISCUSSION OF THE FINDINGS

The three hypotheses that were formulated are statistically significant which gives us a good significant base of making our decision. This means that, for academic performance of the student in mathematics to be high, teachers have to be motivated, satisfied and effective. Oyedeji [6] revealed that, teachers` needs and morale are very important which influences individuals and group to perform in order to achieve the school objectives. He further said that the productivity may increases when needs of the teachers are met which in turn may enhance excellence performance of students academically.

It is clear that for teachers to be motivated, they fringe benefits to increase their take home pay. Adams et al [1] argued that when output and input are not adequate, it creates frustration and job dissatisfaction which is in turn may affect academic performance of students most especially in mathematics.

When teachers are promoted, offered in-service training, attend conference, seminar and refresher courses. It tends to increase their growth and morale to produce at higher level. Nakpodice [5] said that the quality of any educational system depends to a great extent on the quality of the teachers in terms of academic and professional qualification and experience as well as the level of competence and dedication to their primary functions. This can only be achieved when seminar, course and in-service training are guaranteed to improve their quality.

Finally, in a study, oziki [7] found that teachers were unhappy, uninspired and unmotivated. To pre-empt his assertion, motivation related factors in the secondary schools must be put in place to create job satisfaction among teachers and good environment for student academic achievement.

X. CONCLUSION

The aim of this study is to reveal the significant effect of teachers` motivation on students` academic performance. As a result of this, evidences were gathered at the four government secondary school in Makurdi local government area where the administrations of a well designed questionnaire were done, the following are the conclusion on the study.

- (d) There is a significant effect between the condition of service of teachers and student`s academic performance in mathematics, meaning that the condition of service of teachers have a direct impact on student`s academic performance in mathematics.
- (e) There is a significant effect between the teachers` fringe benefit payment and student`s academic performance in mathematics which implies that the teachers` fringe benefit payment can relatively influence student`s academic performance in mathematics
- (f) The teachers` promotion of in-service training has a significant effect on student academic performance in mathematics which implies that the teachers` promotion of in-service training has a direct impact on the academic performance of their students in mathematics.
- (g)

XI. RECOMMENDATION

This study has exhausted all the factors that enhance teachers` motivation. Therefore, it`s recommended that, more research that involves more teachers and students in response to the questionnaire and to increase more variables be carried out. Based on the findings, similar studies primary school teachers should be carried out.

Furthermore, the concept of motivation among teachers should be carried out in secondary schools most especially in government schools in other states of the federation to create uniformity in our educational system.

The teachers` motivations comparative study on both government secondary school and private secondary school teachers should be carried out.

Finally, government should provide good condition for learning (educational facilities) to student and should look with keen interest into the plight of teachers by reviewing upward their welfare package, the condition of service and other benefits. If this is done, it will raise the standard of living of the teachers; make the job lucrative and professional nobler which will enhance impetus on the academic performance of students in mathematics.

ACKNOWLEDGMENTS

The authors wish to express their gratitude to God for the help and favour they received in conducting the fieldwork and the analysis that resulted in this report. Our sincere appreciation goes to Mr Akinwande and Mr Popoola for their assistance during the data collection process and data entry of this research paper.

REFERENCES

- [1]. Adams, G. L., & Engelmann, S. (1996). Research on direct instruction: 25 years beyond DISTAR. Seattle, WA: Educational Achievement Systems.
- [2]. Cobb, P. (2008) analysing the mathematical learning of the classroom community: the case of statistical data analysis, in proceeding of the 2nd Conference of the International Group for the Psychology of Mathematics Education 1 pp33-48 University of Stellenbosch, South Africa.
- [3]. Maicibi, N.A. (2003). Human Resource Management Success. Kampala.Net Media Publication. Ltd. Uganda
- [4]. McMillian, J.H., Schumacher, S. (2001). Researchers in Education. A conceptual introduction (5th ed.) New York: Longman.
- [5]. Nakpodice (2001), the role of education administration in promotion of in-service Benin city :Ambik press
- [6]. Oyedeji (1998) The supply and demand for technical and vocational teachers in junior secondary schools in Kwara state," international journal of educational management university of Ilorin, vol, No 1, 1998.
- [7]. Oziki A.O,(1992) A handbook on school administration and management Lagos Macmillan Nigerian publishers limited, 1992
- [8]. Wolfenson O, (2000) the Role of Parent in Student Academic Performance in Bondo Districts. Unpublished M. Ed thesis, Egerton University, Njoro Kenya.