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MATHEMATICS TEACHERS' CHARACTERISTICS AND JOB PERFORMANCE IN IBADAN, OYO STATE

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ABSTRACT

This study investigated mathematics teachers' characteristics and Job Performance in Ibadan, Oyo State. The study adopted a descriptive survey method with an ex-post-facto used to get Mathematics Teachers' Performance Evaluation Ratings (MTPER) from the principals of the selected schools coupled with a self-made questionnaire on Mathematics Teachers' Characteristics Questionnaire (MTCQ) which adopted a 4-point Likert scale to elicit information from the respondents. One hundred (100) mathematics teachers randomly selected from twenty (20) government-owned senior secondary schools in Ibadan North-East Local Government Area participated in the study and a researcher-made questionnaire was employed for the study. Analysis of variance was also carried out on the data collected from the study. Findings from the study revealed that all teacher characteristics (qualification, experience, knowledge of subject matter and pedagogical skill) when taken together made significant contributions to teachers' job performance in mathematics. However, each of the teachers' characteristics alone made a significant contribution to teachers' job performance in mathematics except teachers' qualifications which was found not to be significant. The study recommended: (i) regular seminars and workshops for teachers to upgrade and enhance their knowledge of mathematics; and (ii) continuous professional development of teachers should be encouraged for maintaining high-quality mathematics teachers.

Keywords: Mathematics Teachers, Qualification, Experience, Knowledge of Subject Matter, Pedagogical Skill, Job Performance

1.0 INTRODUCTION

Teachers are the major human resources saddled with the responsibilities of imparting knowledge to students in school settings. Teaching involves impactful exercises by teachers which in a variety of ways require time, effort and commitment to achieve results. Teachers prepare pupils and students for the future, the labour market and for the socio-economic development of every nation. Many of the vital roles in ensuring quality education delivery are being played by teachers and the best roles known with teachers is in educating students in their care for distinct behavioural positive change (Odogwu & Mbah, 2015). The most common roles teachers play in the classroom is to impart knowledge to students by following the curriculum and are expected to encourage their students to acquire relevant academic skills. Teachers use various methods such as lecture, play way, demonstration method, small

group activities and hands-on learning activities to bring about necessary behavioural changes in students. Beyond that, they serve many other roles in the classrooms ranging from organizing and managing the classrooms to creating a conducive classroom environment, to mentoring and nurturing students in becoming role models. Teachers are also sensitive to what is going on in the classroom by playing the role of foster parents to the students during school hours. These they do by being responsible for promoting the goals and ethics of the schools through structured classroom activities as well as participating in the modelling of appropriate standards of behaviour (Mohammed, 2012).

One of the goals of education in Nigeria is the acquisition of appropriate skills, development of mental, physical and social abilities and competencies as equipment necessary for individual citizens to live and contribute to the development of society (Ada, 2011). Over the years, education has been assisting scientists to invent equipment and devices which has resulted in high technological advancement. It is such, so that, the more developed life becomes, the more necessary education is needed for everyone. According to Odey (2016), education empowers the citizenry to avail their rights as citizens and seek improvement in the structural functioning of governance and economy. It is only when the citizens are aware of the policies of the governments that they can support or protest change that can bring development to the society.

Considering the factors responsible for achievement in mathematics, one possibly ignores those aspects of which teachers' characteristics could be of significant value to their productivities in classroom activities. The starting point may be an achievement in mathematics itself where wide variations occur from the point of non-performance of students to the point of outstanding achievement in the subject. If we consider a group of students, few students could emerge as high achievers while others on the one hand could be of average abilities as well as those who could fall into the category of low abilities (Sam-Kayode, 2016). Students' achievement could be facilitated by teachers' mastery of the subject as well as using the right approach and correct pedagogies to impact the necessary knowledge into the students. This calls for the need for continuing education programmes to be organized for improving the skills of mathematics teachers and in turn boost students' learning outcomes either by the school managements concern or the school proprietors for effective service delivery and better performance on the job, leading to productive outcomes (Oguguo, Ene, Uzosike & Oparaku, 2020). One clear fact is that a teacher cannot teach effectively unless he or she is a continual learner on a regular basis and maintains high levels of enthusiasm to improve on his or her knowledge on the subject matter as well as effective ways that can encourage better service delivery (Hussain, 2019).

Activities carried out by teachers in school settings are descriptions of teachers' job performance. These activities could be rated by designated school authorities as a means of measuring what sought of activities carried out by the teachers as well as the quality of their services to help students to learn and to aid the school outputs. Mathematics teachers' job performance in this sense is all the inputs of mathematics teachers to the teaching of mathematics in order to produce competent mathematics students who can confidently compete with their counterparts within and outside the school with outstanding achievement in mathematics. Mathematics teachers' job performance entails achieving the objectives and goals of teaching mathematics within stipulated periods and covering the outlined subject

Volume: 05, Issue: 01 " January - February 2022"

ISSN 2582-0176

contents. Teachers' job performance can be measured by students' learning outcomes (Omeodu & Amadi, 2018).

Among the variables that describe teachers' characteristics is teacher's qualification. Qualification can be viewed as criteria that must be met in order to be fit for a position or a job. It is an attribute that makes someone earn a position based on the specified outline. Mathematics Teachers' qualifications are those expected criteria from a person who would occupy mathematics teaching positions in any accredited school or educational institution. Qualifications can be looked into from different perspectives which academic or certificate qualification is the part being considered in this study. A certified teacher based on the National Policy on Education (FRN, 2013) must have gone through the teachers training exercises and passed with the evidence of bagging any of the following certificates in Nigeria; Nigerian Certificate in Education (NCE), Bachelor of Education (B.Ed.)., Bachelor of Science Education (BSc.(Ed.)), Post Graduate Diploma in Education (PGDE), Post Graduate Certificate in Education (PGCE), Master of Education (M.Ed.), Doctor of Philosophy (PhD) in Education and any other certificate relevant for teaching in Nigeria. A teacher's qualification is the starting point for eligibility for a teaching career. It shows the credibility and competence in carrying out teaching by the teachers. This extends to the detail area in which the teacher is qualified to take up a specific teaching appointment. There are cases where teachers are certified as holders of teachers certificates but not eligible to teach a particular subject. Such is where a holder of B.Sc. (Ed.) Biology takes up the role of mathematics teaching, this will definitely bring in some dearth in his or her performance on the job because of inadequacy in the content areas. A qualified teacher possesses a mastery of the subject through a combination of content mastery, command of a broad set of pedagogic and communications skills which are reflective of their teaching and students' outcomes (Jega & Julius, 2018; Rabiu & Saidu, 2018).

A teacher's experience is a function of a long period of practical teaching. This is easily noticeable in the way a teacher put together the combination of qualifications, knowledge and skills acquired from direct involvement in doing the job. An experienced teacher considers a lot of factors in relation to the school and the students he or she teaches. Experience counts and does not come in a day but through repeated practice in doing something. Studies have shown that teachers with at least three consecutive years of quality teaching can be termed as experienced teachers who can help students to master the subject contents areas, resulting in improved performance. This can be made possible as a result of repeated participation and involvement in the teaching of that particular subject over time, coupled with the use of combinations of various appropriate methods to teach the subject (Adeyemi, 2010; Okoji, 2016).

Knowledge of the subject matter has a link with the needed skills related to job performance. Teachers' knowledge of what to teach is vital to doing the job. One of the reasons a teacher could be employed to teach is because he or she knows what to teach in terms of the subject content areas (Okoji, 2016). A knowledgeable teacher simplifies the content of the subject according to students' levels of understanding. Mathematics teachers cannot shy away from this quality of knowledge of subject content due to the nature of mathematics which possesses some abstractness and needs to be well explained to students to understand. Knowledge of the subject matter possessed by a teacher helps to instil confidence in the

teacher and enables the teacher to diagnose and helps students to overcome difficulties in learning and understanding concepts in the learning areas (Wilson, 2017).

Pedagogy entails the principles and methods imbibe by teachers to impart knowledge to students. Instructional methods employed by teachers go a long way to assist students in acquiring the needed knowledge or discourage students from learning (Abdulkarim, Bomala & Abimbola, 2019). A teacher's ability to employ different methods in teaching is also characterized by how long and how skilful the teacher is on the basis of the subject to be taught which has a significant role in how the teacher is doing on the job. A teacher learns to employ different to teach all in a bid to get the result of his or her teaching and as a matter of fact, how well the teacher knows or understands his or her students in terms of abilities, intelligence, attention span and other related facts about students' dispositions.

In the submission of Park and Yang (2014), what children learn, retain and practice after school has a direct impact on the nation's competencies and skills based on the input of the concerned teachers. What students learn from their teachers, both formally and informally determines the individual's ability to contribute to national development. Educated human resources constitute manpower and personnel that bring about national development. It, therefore, means that the quality of education received by the citizens determines the level of development of their nation. A number of factors determine the level of performance in the school system especially the quality of the input from school processes and variables. Goals of education can only be achieved with a well-organized school system that would ensure that all aspects of school life are well articulated and effectively coordinated.

One of the school subjects which plays indispensable roles in human lives and in society is mathematics. Mathematics is an everyday subject in schools and a tool used by everyone to get things done in society. Its usefulness cuts across every facet of life from place to place as well as in all disciplines. In the modern world, mathematics is being increasingly used in science and technology as well as in the social sciences (Sam-Kayode & Salman, 2013). With the use of computers and other devices, there is more emphasis on mathematics, especially at school levels. Looking at the world from technological perspectives, it is more mathematically inclined. However, some school students viewed mathematics as abstract while some perceived it as an arid zone due to the ways they were being taught by some so-called teachers. Though the teacher can teach mathematics with the help of modern educational technological devices and more advanced effective methods of teaching, there is a need for mathematics teachers to display sound knowledge about the subject matter, thus, helping teachers to discharge their duties well in order to meet up with the changing trends in the society. This calls for insight into mathematics teachers characteristics which reflect their job effectiveness in the schools where they operate as facilitators and mentors (Osagiobare, Ebohon & Musa, 2018).

2.0 STATEMENT OF THE PROBLEM

Looking at teaching as a career that provides excitement, personal reward and chance to encourage and support others to achieve their goals, efficient teachers work with their colleagues, other professionals and community members to inspire their students to learn. Though teachers are exposed to different teaching activities during their development

exercises, they acquire experiences that would help them to foster in the teaching profession such as having the necessary knowledge in their particular subject areas, patience, a good sense of humour and having the understanding of their students' individual differences in terms of abilities and uniqueness. These qualities are essential to ensure a permanent change in students' behaviours. With such qualities, teachers are expected to motivate and encourage pupils to study well in order to improve the standard of education. However, there have been general views on teachers' job performance in teaching and learning mathematics. Most teachers manage to do well in their roles in the classrooms while others still struggle in meeting up with expectations from concerned stakeholders. These could result from various factors responsible for mathematics teachers' job performance in teaching mathematics. It is on this note that this study aimed at finding out mathematics teachers' characteristics and job performance in Ibadan, Oyo State.

The study specifically investigated the relationship between mathematics teachers':

i. qualifications and job performance;
ii. years of experience and job performance;
iii. knowledge of subject matter and job performance;
iv. pedagogical skills and job performance; and
v. characteristics (qualification, experience, knowledge of subject matter and pedagogical skill) combined contributions on job performance.

2.1 Research Hypotheses

The following null hypotheses postulated were tested at a 0.05 level of significance:

H01: There is no relationship between mathematics teachers' qualifications and job performance.

H02: There is no relationship between mathematics teachers' years of teaching experience and job performance.

H03: There is no relationship between mathematics teachers' knowledge of subject matter and job performance.

H04: There is no relationship between mathematics teachers' pedagogical skills and job performance.

H05: There is no relationship between mathematics teachers' characteristics (qualification, experience, knowledge of subject matter and pedagogical skill) and job performance in mathematics teaching.

3.0 METHODOLOGY

The teacher characteristics considered in this study were: qualification; experience; knowledge of the subject matter; and pedagogical skill. The research employed a descriptive research design using a survey approach and an ex-post-facto was also adopted to get Mathematics Teachers' Performance Evaluation Ratings (MTPER) which was obtained from

Volume: 05, Issue: 01 " January - February 2022"

ISSN 2582-0176

the Principals of the teachers who participated in the study. The population for this study comprised all Mathematics teachers in Ibadan, Oyo State. The sample for the study comprised one hundred (100) mathematics teachers drawn from twenty (20) government-owned secondary schools in Ibadan North-East Local Government Area, Oyo State using a simple random sampling technique. The instrument used for the study was a self-structured 20-item questionnaire entitled Mathematics Teachers' Characteristics Questionnaire (MTCQ) which adopted a 4-point Likert scale to elicit information from the respondents. The research instrument was validated by three experts in mathematics education for face and content validity in order to ensure that the instrument measured what it was supposed to measure. The reliability of the instrument was determined using Cronbach Alpha statistics in order to ensure internal consistency of the instrument of which a reliability index of 0.84 was obtained from the exercise and was considered reliable for the study. The questionnaire was divided into two sections: Section (A) was on the respondents' Bio-data while section (B) sought to sieve Mathematics Teachers' Responses on Teachers' Characteristics in Ibadan North-East Local Government Area, Oyo State. The data collected were analyzed using frequency counts, percentages to analyze the demographic data, while Pearson Product Moment Correlation Statistics and Analysis of Variance (ANOVA) were employed for the hypotheses generated for the study at 0.05 level of significance.

4.0 RESULTS

Based on the data generated from the study, the results are hereby displayed:

Table 1: Distribution of Respondents by Gender

Gender	Frequency	Percentage (%)
Male	39	39.00
Female	61	61.00
Total	**100**	**100.00**

The demographic information presented in table 1 showed that 39 (39.00%) teachers were males, while 61 (61.00%) were females. This depicted that the study considered the views of both male and female government owned senior secondary school mathematics teachers in Ibadan North-East Local Government Area, Oyo State.

Hypothesis 1: There is no relationship between mathematics teachers' qualifications and job performance.

Table 2: Distribution of Respondents by Qualification

Volume: 05, Issue: 01 " January - February 2022"

ISSN 2582-0176

Qualification	Frequency	Percentage (%)
NCE	5	5.00
HND	12	12.00
B.Sc.	26	26.00
B.Ed.	29	29.00
B.Sc. (Ed.)	11	11.00
M.Ed.	3	3.00
M.Sc.	6	6.00
PGDE & others	8	8.00
Total	**100**	**100.00**

From the demographic information presented in table 2, qualification distribution of the respondents revealed that 5 (5.00%) teachers were Nigerian Certificate of Education (NCE) holders, 12 (12.00%) teachers were Higher National Diploma (HND) holders, 26 (26.00%) teachers had Bachelor of Science (B.Sc.), 29 (29.00%) teachers had Bachelor of Education (B.Ed.), 11 (11.00%) teachers had Bachelor of Science Education (B.Sc.(Ed.), 3 (3.00%) teachers were Master of Education (M.Ed.) holders, 6 (6.00%) teachers were Master of Science (M.Sc.) holders and 8 (8.00%) teachers had PGDE and other qualifications. Hence, the result in table 2 shows that, B.Ed. holders dominated the mathematics teaching profession in Ibadan North-East Local Government Area, Oyo State. It also depicted that 56 (56.00%) of the respondents possess basic teaching qualifications. This however was in line with National Policy on Education (2013) on the required qualifications for the teaching profession which NCE, B. Ed., B.Sc. (Ed.), M.Ed., and PGDE are inclusive.

Table 3: Relationship between Teachers' Qualification and Job Performance

Variables	N	Mean	Std. Dev.	r	p	Remark
Teachers' qualification	100	37.85	1.85	0.048	0.05	Not Sig.
Teachers' Job Performance		54.25	4.26			

P<0.05 level

It is shown in table 3 that there is no significant relationship between teachers' qualifications and job performance r = 0.048, and is less than critical value 0.05. Therefore we do not reject the null hypothesis.

Hypothesis 2: There is no relationship between mathematics teachers' years of teaching experience and job performance.

Table 4: Distribution of Respondents by Years of Teaching Experience

Volume: 05, Issue: 01 " January - February 2022"

ISSN 2582-0176

Years of Experience	Frequency	Percentage (%)
1-5Years	25	25.00
6-10 Years	22	22.00
11-15 Years	17	17.00
16-20 Years	18	18.00
20 Years and above	18	18.00
Total	**100**	**100.00**

Table 4 revealed that 25 (25.00%) mathematics teachers were within 1 to 5 years of experience, 22 (22.00%) teachers were within 6 to 10 years of experience, 17 (17.00%) teachers were within 11 to 15 years of experience, 18 (18.00%) teachers were within 16 to 20 years of experience while 18 (18.00%) mathematics teachers were of 20years and above teaching experience. This implied that 75 (75.00%) mathematics teachers had more than 5 years of teaching experience in mathematics among the respondents at the government owned senior secondary schools in Ibadan North-East Local Government Area, Oyo State. This indicated that the responses of the teachers who participated in the study were relevant to the study.

Table 5: Relationship between Teachers' Years of Teaching Experience and Job Performance

Variables	N	Mean	Std. Dev.	r	p	Remark
Teachers' years of teaching experience	100	62.68	41.43	0.31	0.05	Sig.
Teachers' job performance		29.24	01.88			

P<0.05 level

It is shown in the above table 5 that there was a relationship between teachers' years of teaching experience and job performance where r = 0.31 and is greater than critical value 0.05. The null hypothesis is therefore rejected.

Hypothesis 3: There is no relationship between mathematics teachers' knowledge of subject matter and job performance.

Table 6: Relationship between Teachers' Knowledge of Subject Matter and Job Performance

Variables	N	Mean	Std. Dev.	r	p	Remark
Teachers' knowledge of subject matter	100	58.35	21.28	0.16	0.05	Sig.
Teachers' job performance		40.35	3.85			

Volume: 05, Issue: 01 " January - February 2022"

ISSN 2582-0176

P<0.05 level

Table 6 shows that there was a significant relationship between teachers' knowledge of subject matter and job performance where r = 0.16 and is greater than critical value 0.05. Null hypothesis is rejected.

Hypothesis 4: There is no relationship between mathematics teachers' pedagogical skills and job performance.

Table 7: Relationship between Teachers' Pedagogical Skills and Job Performance

Variables	N	Mean	Std. Dev.	r	p	Remark
Teachers' pedagogical skills	100	65.35	31.28	0.13	0.05	Sig.
Teachers' job performance		25.35	1.75			

P<0.05

It is shown in table 7 that there was a relationship between teachers' pedagogical skills and job performance as r = 0.13 and is greater than critical value 0.05. Hence, the null hypothesis is rejected.

Hypothesis 5: There is no relationship between mathematics teachers' characteristics (qualification, experience, knowledge of subject matter and pedagogical skill) and job performance in mathematics teaching.

Table 8: Analysis of Variance (ANOVA) on Teachers' Characteristics (qualification, experience, knowledge of subject matter and pedagogical skill) and Job Performance in Mathematics Teaching

Source of Variation	Degree of Freedom	Sum of Squares	Mean Square	F_{cal}	F_{tab}	Remark
Regression	3	68.563	22.854			
				3.86	2.70	Sig.
Residual	96	568.432	5.921			
Total	99	636.995				

Table 8 shows the Analysis of variance (ANOVA) of teachers' characteristics (qualification, experience, knowledge of subject matter and pedagogical skill) and teachers' job performance in mathematics teaching. The table showed that F-ratio = 3.86 while F table = 2.70 at 0.05 level of significance. The null hypothesis is rejected showing that there is a significant relationship between teachers' characteristics (qualification, experience, knowledge of subject matter and pedagogical skill) and teachers' job performance in mathematics teaching in Ibadan, Oyo State. This implies that the four characteristics have positive multiple relationships with teachers' job performance in mathematics teaching.

Hence they have the potential of explaining teachers' job performance in teaching mathematics. It also implies that the four variables made a significant joint contribution to mathematics teachers' job performance.

5.0 DISCUSSIONS

The result from table 3 on hypothesis 1 revealed the relationship between teachers' qualifications and job performance. It was displayed that there is no significant relationship between teacher's qualifications and job performance r = 0.048, and is less than critical value 0.05. The null hypothesis 1 was not rejected. This was in variance with the expected basic teaching qualifications required in the National Policy on Education (2013) for the teaching profession. However, Jega and Julius (2018) submitted that teachers' qualifications indexes mastery of the subject and encourage teachers to be confident in their discharge of duties. This is also in line with the submission of Rabiu and Saidu (2018) whose corroboration on teachers' qualification revealed that teachers' specializations is made distinct as a result of their qualifications.

Table 5 displayed the outcome on hypothesis 2 and it showed that there was a relationship between teachers' years of teaching experience and job performance where r = 0.31 and is greater than critical value 0.05. The null hypothesis was however rejected. This result was in line with the findings of Okoji (2016) corroborated by Adeyemi (2010) who asserted that experience is made possible as a result of repeated participation and involvement in the teaching of a particular subject over time, which when coupled with the use of combinations of various appropriate methods to teach mathematics would result in high performance on a job.

On the aspect of knowledge of the subject matter, table 6 shows that there was a significant relationship between teachers' knowledge of subject matter and job performance where r = 0.16 and is greater than critical value 0.05, hence rejecting the null hypothesis 3. Submissions of Wilson (2017) were not far fetched from the need for teachers of mathematics to master the content of the subject for ease of delivery and clarity of achievement of the purpose of the content. This will also enhance confidence in the teacher when questions are raised by students for further clarifications with respect to the topic taught by the teacher.

Table 7 showed that there was a relationship between teachers' pedagogical skills and job performance as r = 0.13 and is greater than critical value 0.05. Hence, null hypothesis 4 was rejected. This result was in line with the submission of Abdulkarim, Bomala and Abimbola (2019) whose findings reported that teacher's ability to employ different methods in teaching mathematics is fundamental to the skillfulness of the teacher in teaching any topic in mathematics and it is significant to how the teacher is performing on the job. This explains the effective delivery of teaching mathematics due to the nature of the content of mathematics as a subject.

Findings from the study revealed that all teachers' characteristics (qualification, experience, knowledge of subject matter and pedagogical skill) when taken together made significant contributions to their job performance in mathematics as revealed in table 8 which was the ANOVA result on all the teachers' characteristics indicated in hypothesis 5. This indicated that all the highlighted characteristics are necessary for the effective job performance of

mathematics teachers and must not be overlooked in getting the best out of any teacher employed to teach mathematics.

This study also sought to establish that, teachers' qualifications which were not significant in this study could be as a result of mathematical ideas possessed by teachers in related disciplines such as physics, chemistry, computer science and other related sciences. Teachers who could sometimes be employed to teach mathematics when qualified mathematics teachers are not available to teach the subject could proffer explanations to this aspect of the study, which professionally need not be in order to encourage specialization and proficiency in mathematics teaching.

6.0 CONCLUSION

The study focused on Mathematics Teachers' characteristics and job performance in Ibadan with a focus on Ibadan North East Local Government Area, Oyo State. Findings from the study revealed that all teacher characteristics considered; qualification, experience, knowledge of subject matter and pedagogical skill when taken together made significant contributions to mathematics teachers' job performance. The exception of teachers' qualifications not significant in contributing to mathematics teachers' job performance was however explainable as a result of other teachers in the related field taking mathematics teaching in the absence of qualified mathematics teacher(s). These notwithstanding, qualified teachers of mathematics should be employed to teach mathematics in order to encourage specialization and skillfulness in service delivery and job performance.

7.0 RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. Teachers should be exposed to seminars and workshops to upgrade and enhance their knowledge of mathematics;
2. Qualified teachers of mathematics should be employed to teach mathematics irrespective of engaging standby teachers of related science subjects to teach mathematics in order to encourage quality job performances;
3. Teacher education program should be given much attention, especially in the area of course content with relevant methods of teaching different topics in mathematics;
4. Regular and continuous professional development is paramount to developing and maintaining high-quality mathematics teachers who would render quality job performance; and
5. The Ministry of Education should ensure that all teachers have the chance to improve their classroom instruction by receiving regular training aimed at professional growth and better job performance.

REFERENCES

Abdulkarim, A., Bomala, I. & Abimbola, N. G. A. (2019). Effect of ICT-Driven Pedagogy on the Achievement of Secondary School Students within Gombe Metropolis in Geometry. ABACUS: Journal of the Mathematical Association of Nigeria, 44 (1), 144-150.

Ada, N. A. (2011). Issues in Sociology of Education: Gboko: Destiny Ventures Publisher.

Adeyemi, T. O. (2010). Principal' Leadership Styles and Teachers' Job Performance in Secondary Schools in Ondo State, Nigeria. Current Research Journal of Economic Theory, 2010, 3(3), 84-92.

Federal Republic of Nigeria (2013). National Policy on Education: Abuja: Federal Ministry of Education. NERDC Press.

Hussain, A. (2019). Teacher Training in Mathematics. Retrieved online from https://math.arizona.edu/~atpmena/conference/presentations/Azhar_Hussain_Teacher_Training.ppt

Jega, S. H. & Julius, E. (2018). Effect of Teachers' Academic Qualification and Experience on Students' Academic Achievement and Interest in Mathematics in Kebbi State. International Journal of Advanced Academic Research, Arts, Humanities and Education, 4(6). Retrieved online from http://www.google.com/url?q=http://www.ijr.org/articles/Volum4- Number6/Arts-Humanities-Education/ijaar-ahe-v4n4-apr18- p25.pdf&sa=U&ved=2ahUKEwij8vaSIOHwAh WD3eAKHdCxAR k4ChA WMAF6BAgJ EAE&usg=AOvVaw25yvyCQ1Vp5zJMPSF2LLco

Mohammed, J. S. (2012). Job Satisfaction and Motivation of Teachers of Public Educational Institution. International Journal of Business and Social Sciences, 3(8), 28-34

Odey, M. O. (2016). The Role of Assessment and Research in Catching-Up with the Trend in Global Education. African Journal of Theory and Practice of Educational Research (AJTEPR), 3, 145- 160.

Odogwu, H. N. & Mbah, S. (2015). Mathematics Teachers' Attitude to and Competence in the Use of Information and Communication Technology (ICT) in Lagos State. ABACUS: Journal of the Mathematical Association of Nigeria, 40 (1), 160-172.

Oguguo, B. C. E., Ene, C. U., Uzosike, M. C. & Oparaku, M. O. (2020). Perception of Factors that Enhance the Effectiveness of Teachers and Students Academic Performance in Public Secondary Schools. Nigerian Journal of Educational Research and Evaluation, 19, 175-187.

Okoji, O. O. (2016). Relationship between Secondary School Principals' Leadership Style and Teachers' Job Performance in Selected Rural Communities of Ondo State, Nigeria. Annals of Modern Education, 8(1), 27-36.

Omeodu, M. D. & Amadi, N. S. (2018). Impact of In-Service Training on Science Teachers' Performance in Rivers State. International Journal of Advanced Academic Research Arts, Humanities and Education. 4(2), 1-12.

Osagiobare, E. O., Ebohon, V. S. & Musa, C. N. (2018). The New 'Connectivities' in the Digitalization of Education and their Implications for Teacher Education and Learning. Ibadan Journal of Educational Studies (IJES), 15(2),49- 53.

Volume: 05, Issue: 01 " January - February 2022"

ISSN 2582-0176

Park, M. H. & Yang, K.S. (2014). The Relationship between Career Decision-Making Styles and Jog Seeking Self-Efficacy of College Students in Korea. Journal of Asian Vocational Education and Training, 7, 32-39.

Rabiu, A. T. & Saidu, S. (2018). Impact of Teachers' Quality and Instructional Materials on Interest and Academic Performance in Mathematics among Secondary School Students in Zaria Local Government Area, Kaduna State. ABACUS: Journal of the Mathematical Association of Nigeria, 43 (1), 179-188

Sam-Kayode, C. O. (2016). Influence of Academic Ability Levels on Senior School Students' Conceptions of Geometry in Ogun State, Nigeria. African Journal of Theory and Practice of Educational Research (AJTEPR), 3, 47- 65.

Sam-Kayode, C. O. & Salman, M. F. (2013). Effect of Ludo Game Strategy in Teaching Probability on Students' Performance in Senior Secondary Mathematics. West African Journal of Education (WAJE), XXXIII, 171-180.

Wilson, G. (2017). Principals' Leadership Style and Staff Job Performance in Selected Secondary Schools in Emohua Local Government Area of Rivers State, Nigeria. African Research Review, 11(3), 115-131.

