

THE EFFECTS OF TEACHERS' FACTOR ON STUDENTS PERFORMANCE IN THE FINAL EXAMINATIONS IN ABUJA (FCT), NIGERIA

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Abstract

The performances of students in final year examinations in recent times have been very low and this may have been as a result of teacher effect. The study is an evaluation of effect of teachers' factor on students' performance in final examinations in the Federal Capital Territory (FCT), a case study of Secondary Schools in Abuja Municipal Area Council to determine teachers' influence on students. The Literature review provided a framework for the study and focused on effect of teachers on students' performance in areas of teacher characteristics related to teacher effectiveness and student's evaluation of instructional effectiveness in order to ensure proper understanding of the topic. Survey method was used for the study using a Questionnaire for gathering of primary data. A sample was taken using stratified random sampling for selected Schools, simple random sampling to select respondents out of which 105 responses was received for analysis. Analysis revealed that teachers positively affect students' performance, but teaching methodology is not adequate. In conclusion students are not concerned with the race, gender, ethnicity and other characteristics of their teachers; however, the students have raised concerns on teachers teaching methodology.

Keywords: *Teachers, Teachers Factor, Student Performance, Final Examinations, Secondary School.*

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1. Introduction

"The result analysis of the total percentage of candidates in public schools with credits above including English and Mathematics for West African Examination Council (WAEC) and National Examination Council (NECO) Examinations is 43.3% and 57.7% respectively." (Education Secretariat Annual Media Briefing, 2019).

A Teacher has a direct responsibility in shaping of a student's performance generally; The teachers are a crucial and important factor in student's education and performance, teacher quality is particularly important for students with lower abilities (Aaronson et al., 2007).

Students performance in academic life requires high intelligence levels; however, one other important factor is teachers' characteristics in addition to intelligence. Studies have indicated other factors that can be useful predictors of academic performance (Chamorro-Premuzic & Furnham, 2003).

These factors become important because whenever Schools carry out academic sessions, the main indicator for the measurement of performance are the final examinations which eventually show whether all the teacher and learner activities for the period were worthwhile (Kayode & Ayodele, 2015). Simply put good results may indicate high performance while poor results may in turn indicate low performance.

The performance of final year students in Secondary Schools all over Nigeria with the FCT inclusive have been very low despite all that was put into the preparation of students for the final examination. The WAEC examinations specifically have over the years recorded more failure than the national examination NECO (Kayode & Ayodele, 2015). There is always a problem of understanding where the causes of these failures are coming from i.e. the students or their teachers'. In line with the problems and after a review of related literature, the following question have been set forward to guide the research: How do teachers influence the performance of secondary school students in final examinations? Hence, the hypothesis;

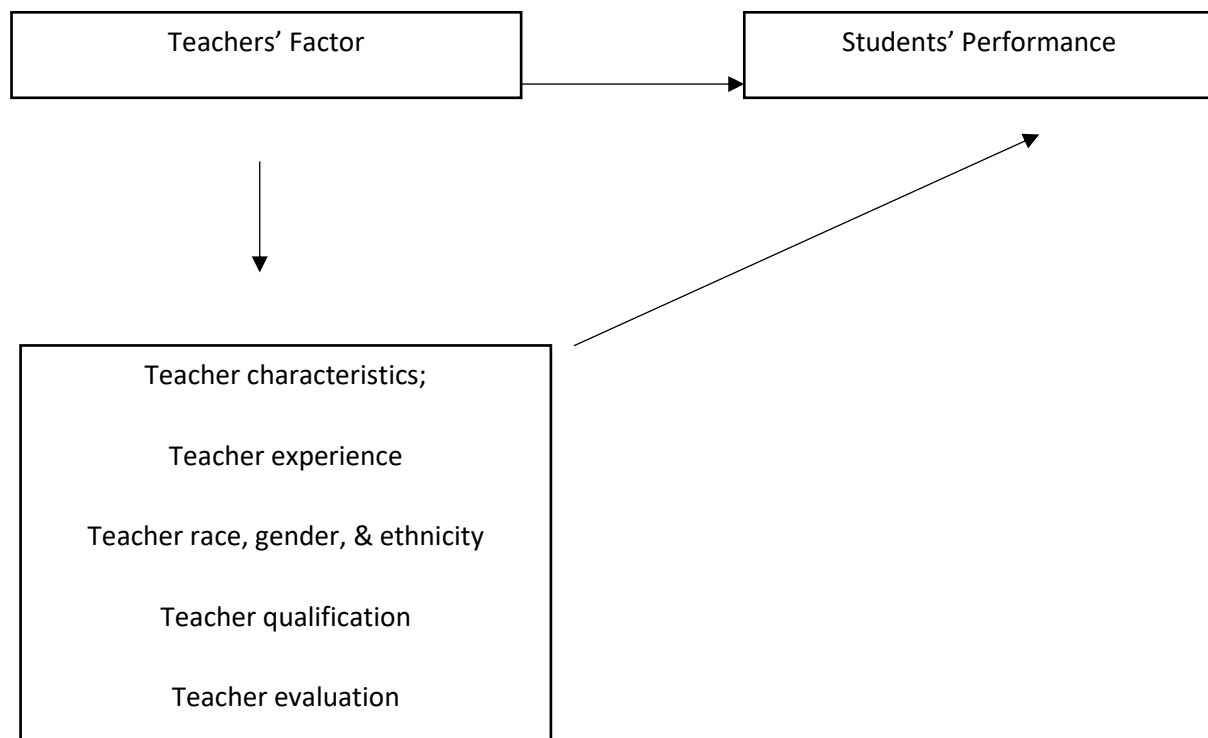
H_{01} : Teachers have no significant influence on students' performance in final examination in the FCT.

The significance of this study is that the teachers' factor on students' performance has always been a topic of discussion by parents, teachers, administrators and the general public; hence a further study in this area. The study is also of significance to policy makers of FCT Educational Secretariat in improving education delivery and future student performance in final exams. Empirical reviews have shown literature gaps concerning teacher factors like; teacher qualification, teaching methodology, teacher race, gender and ethnicity, teacher evaluation, teacher characteristics and teacher experience.

The purpose of the study is to look at issues that revolve around the evaluation of the teachers' performance but from the students' perspective regarding their final examinations within Abuja Municipal Area Council (AMAC) of FCT and to proffer solutions on how teachers' and student performances may be improved.

The following sections are the literature review, methodology, results, discussion and finally, conclusion and recommendation of the study.

2. Literature Review



Source: Author Compilation, (2020).

2.1. Conceptual Framework

This section focuses on the conceptualization of variables about teachers' factor and its effect on student performance.

2.1.1. Students Performance

Those who question the value of student evaluations of instruction suggest that the student lacks the perspective to assess instructional effectiveness. However, studies revealed when different instructors of the same course gave a common final examination, the sections who

gave high (low) ratings to their instructors most frequently made high (low) examination scores (Frey, 1973; Braskamp, et al., 1979).

A meta-analysis that provided strong support for the validity of student ratings as measures of teaching effectiveness; students' perceptions of lesson effectiveness were found to be low (high) if the teacher used a high (low) degree of vagueness terms (Smith, 1984).

2.1.2. Experience of Teacher

The extensive literature on teacher effectiveness identifies many factors that are associated with student achievement. These correlations helped in explaining the link between teacher quality and student performance. Most researchers acknowledged that the effect of an additional year of teaching experience on student achievement levels off after the first few years of teaching (Rockoff, 2004; Rivkin et al., 2005) and some other researchers argued that this effect eventually recedes (Aaronson et al., 2007). Review of literature shows generally positive effects of experience on teacher quality. Nonetheless they note that these findings are "difficult to interpret" due to factors not accounted for in most models such as changes in motivation, personal life situation (children, divorce, etc.), and labour market changes over time, as well as the recognition that teachers who stay in the profession and have many years of experience may be very different from teachers that leave after only a few years (Wayne & Youngs, 2003).

In addition, there is no research that explains why the effect of experience flattens out when it does. A ceiling effect whereby teachers will ultimately reach some maximum level of effectiveness after gaining experience and confidence in the classroom should be expected.

2.1.3. Race, Gender, and Ethnicity

Several studies have considered the effects of teachers' race, gender, and ethnicity (RGE) on student performance. Ehrenberg et al. (1995) concluded that, while there are some relationships between these demographic traits and student productivity, they are relatively small. The study found that while teacher RGE by itself is not related to student achievement, combinations of a specific gender with a certain race or ethnicity may produce statistically significant correlations for a given subject. For example, black male science teachers are associated with academic gains for black male, black female, and white female students.

Data from the randomized Tennessee STAR experiment to conclude that when students and teachers are of the same race or ethnicity, an elementary school students' reading and mathematics scores are significantly higher.

2.1.4. Teacher Qualification (Education History, certification, & Test Scores)

There are many factors related to a teacher's education history that have been shown to be related to teacher effectiveness. These include highest degree obtained, coursework and subject matter of degree(s), and rating of undergraduate institution. A review shows that most findings regarding degrees held and coursework taken are largely inconclusive except in relation to mathematics. High school mathematics teachers with an educational background in these fields produce significant gains in student achievement in mathematics (Wayne & Youngs, 2003).

Research also indicated that the ranking of the undergraduate institution attended does have some relationship with student achievement gains, although it is possible that this effect is over estimated because individuals that get into higher ranked schools are also likely to have other characteristics such as high levels of natural intelligence, more motivation, and better organization skills, all of which may also correlate with positive teacher effects on student achievement.

To determine the effects of different teacher certification levels on student achievement. They find that the type of certification that a teacher holds is related to student outcomes. Additionally, the students of teachers certified "out of field" do less well than the students of teachers certified in the subject matter being taught. The strongest finding is that students of teachers with standard certification in mathematics do better than students with teachers that have either no certification or private school certification in mathematics, but their findings are relatively weak (Goldhaber & Brewer, 2000).

A teacher's test scores, whether on college entrance examination, tests of verbal skills, or teacher licensure examinations, can provide some measure of a teacher's natural aptitude and intelligence level. Wayne & Youngs (2003) conducted a review of studies examining test scores and found that they are related to higher student achievement in studies in which college ratings have not been taken into account. Because both test scores and undergraduate institution ranking, as mentioned above, are related to an individual's innate intelligence and ability to work and to learn, these variables may prove to be effective mechanisms to control for teacher ability in a regression to measure teacher effectiveness.

2.1.5. Teacher Evaluation

Studies about the effects of teacher evaluation on student performance and attitudes have yielded somewhat mixed results Thomas, et al. (1993) reported a positive correlation between the amount of teacher feedback on tests, quizzes and homework assignments and student performance in high school biology courses. Page (1958) found in his study involving 74 secondary school teachers that a brief written comment on objective examinations significantly improved student performance.

Cardelle-Elawar & Corno, (1985) teacher evaluation results in improved students' performance, specific feedback on errors draws student's attention to material not adequately learned and provides corrective guidance. Other studies have shown no effect of teacher evaluation on student performance. Stewart & White (1976) replicated Page's (1958) study and reviewed 12 other replication studies, concluding that teacher comments had little or no effect on students' performance. In their review of more than 250 studies of formative assessment, Black and William (1998a) concluded that teacher evaluation can result in positive and negative effects on student learning depending on the quality of feedback.

2.1.6. Teaching Methodology

A teacher needs three dimensions which are knowledge of subject or content knowledge, pedagogical knowledge and general knowledge, these dimensions are indicating a teacher's capacity to teach only what they know (Eggen & Kauchak, 2001).

Pedagogical content knowledge (PCK) as a concept was originated by Shulman (1987), it was a combination of content and pedagogy with knowledge useful for teaching a subject; and knowledge of issues, concepts and challenges with the subject area as experienced by learners. Good teachers have this teaching methodology. Hence PCK is all about translating or simplifying subject matter for students to understand (Nind, 2020).

2.2. Theoretical Review

2.2.1. Behaviours orientation theory

The behaviours orientation theory is a teacher-based model. A specific response is required from a prepared environment with a goal of behavioural change. The position of learning in this theoretical model is the stimulus from the environment. This approach has three

presumptions as follow; behavioural change is the focus point of learning, behaviour is shaped by the environment and the main part of learning is reinforcement (Arab, et al., 2015).

The theory of behaviours orientation was used in the study of Arab, et al., (2015) titled Learning theory: Narrative review in explaining medical students' education. The theory is related to this study due to teaching methodology of secondary school that is teacher centred or teacher-based.

2.2.2. Value-Added Theory

Hanushek & Rivkin (2012) support the Human capital theory through the value-added theory. The main thrust of value-added theory suggests schools will observe differences in student achievement due to teacher quality. During the student's lifetime, advancement in student achievement leads to higher income (Hanushek & Rivkin, 2012). In some instances, the value-added model focuses on teachers' instruction on the lower- achieving students in relation to high-achieving students; Value-added models could be in many forms over time (Hanushek & Rivkin, 2012).

Goldring et al. (2015) used the value-added theory through value added measurements in their study titled; Make room value added: Principals' human capital decisions and the emergence of teacher observation data. The value-added theory is related to this study due to the influences of teacher factor that is meant to add-value on student performance in final examinations.

2.3. Empirical Review

Didinya, et al., (2018) in their study titled "Effect of Performance Appraisal of Teachers on Academic Performance of Students in Public Secondary Schools in Hamisi Sub-County, Vihiga County, Kenya" through the use of questionnaires, document analysis, interviews and focus group discussions. The study found teachers professional knowledge and application; time management; innovative and creative teaching affect students' performance positively. It was recommended that school management should train teachers in these areas. This study was conducted in Kenya East Africa and not in Nigeria which is in the West African region and will assess teachers qualification and teaching methodology.

Lee et al., (2019) studied Teacher gender, student gender, and primary school achievement: Evidence from ten Francophone African countries. The study used Ordinary least square for analysis and found girls learning from a female teacher increases performance in reading and mathematics; however, teacher gender has no effect on boys. Moreover, traditional academic gender stereotypes remain prevalent among both male and female teachers. It was recommended that hiring more female teachers in the region can improve girls' performance without hurting boys. The influence of teacher gender on learning in primary school pupils was examined and not how teachers gender influences secondary school students' performance in final examinations.

Egalite et al., (2015) in a study titled Representation in the classroom: The effect of own-race teachers on student achievement used regression analysis. It found significant positive effects when black and white students are assigned to race-congruent teachers in reading; and for black, white and Asian/Pacific Island students in math. As for race matching by students' prior performance, lower-performing black and white students appear to particularly benefit from being assigned to a race-congruent teacher. The study was conducted in United States using grade three to ten. However, this study will examine effect of teachers race on student performance in Nigeria.

Driessen, (2015) studied Teacher ethnicity, student ethnicity, and student outcomes using empirical evidence from 24 quantitative studies in the United States. It was found that a stronger level of ethnic tie of a teacher to students among the same ethnic background, or a larger segment of ethnic minority teachers at an ethnologically mixed school, leads to predominantly progressive results. The study concluded on a positive preference of the teachers regarding students from their particular ethnic group, and possibly a negative bias against other ethnic groups. This study was restricted to United States; however, this study assesses the influence of teacher ethnicity on student performance in final examinations.

Usman, (2015) studied the Impact of Instructional Supervision on Academic Performance of Secondary School Students in Nasarawa State, Nigeria using Pearson product moment correlational statistics and t-test for analysis. It was revealed instructional supervision with strategies like ensuring of students' note taking, classroom inspection by school managers, examining teachers' lesson notes and review of teachers records have significant correlation with teachers' performance and academic achievement of students in Secondary Schools. The

result of this study on teacher evaluation of students' performance was conducted in Nasarawa State and not the FCT.

Ogunyinka, et al., (2015) in their study *Teacher education and development in Nigeria: An analysis of reforms, challenges and prospects using thematic and content analysis*. It found teacher education plans in Nigerian advanced institutions are deficient in quality and do not conform to international standards. The study looked at several characteristics of teachers from a historical perspective to current times. However, the study did not relate teacher characteristics to student performance and study was conducted at the tertiary level. This study examines how teacher characteristics influence student's performance in final examinations.

Obot, (2014) in his study *Influence of teacher' s competence in subject matter on students' interest in the learning of social studies education in Akwa Ibom State, Nigeria using One-way analysis of variance (ANOVA)*. The study found students with moderate and high-level perception of teachers' characteristics experienced more interest in Social Studies Education than students with low level perception. It concluded teachers' experience in subject matter has much influence on students' interest in learning and recommended for the need to ensure proper and effective teacher education in Nigeria. The study focused on how teacher experience influence students' interest in learning; however, this study focuses on influence of teacher experience on students' performance in final examinations.

3. Methodology

The design of this study is the survey method using a questionnaire; descriptive statistics i.e. Analysis of variance was used to evaluate the effect of teachers' factor on students' performance in final examinations in the FCT using a sample of 105 drawn from Secondary schools' students in Abuja Municipal Area Council (AMAC). The reason for choosing this method is to be able to describe the effect of teachers on students' performance in final examinations within AMAC of the FCT.

The sampling technique is stratified random sampling for the selection of the schools involved in the study due to the geographic spread of the schools. Simple random sampling technique is used for the selection of students from each school selected; a total of 112 participants were selected purposefully. Section A of the questionnaire starts with an instruction on how to fill the questionnaire and contains the demographic data with 4 simple questions to show information about respondents' institution, age and gender. Section B also starts with an

instruction and contains questions in form of statements on effects of teachers on the performance of secondary school students in final examinations.

Experts in the field of education were consulted to determine the structure and content validity of the instrument and all the observation and corrections raised were made.

4. Results

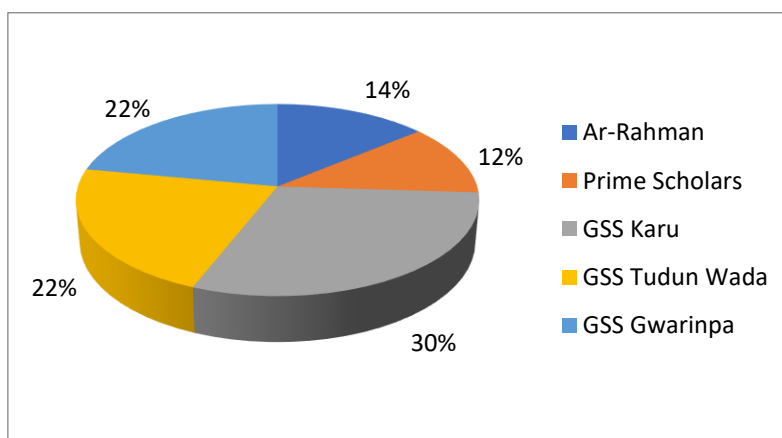
Administration of the questionnaire was carried within five selected Secondary Schools involving 112 participants within the period of three weeks. 105 responses were received due to 7 students not returning their questionnaires. The data is presented using responses from participants then followed by comments on the findings. Table 1 below shows the distribution of respondents according to their schools.

Table 1: Distribution of Respondents (Students)

S/No	Name of School	Number of Students	Percentage %
1	Ar-Rahman International school, Asokoro	15	14
2	Prime Scholars School, Karu	13	12
3	Government Secondary School (GSS), Karu	31	30
4	Government Secondary School (GSS), Tudun Wada	23	22
5	Government Secondary School (GSS), Gwarinpa	23	22
	Total	105	100

Source: Author's computation, (2020).

Figure 1: Distribution of Respondents



Source: Author's computation, (2020).

Comments

Table 1 and Figure 1 above shows most of the respondents are from public schools compared to respondents from private Secondary Schools among the sample of the study.

The Schools are usually either public i.e. owned by the Government or privately owned by individuals, communities or organizations. The ownership of the school may determine how an individual will view the relationship between teachers and performance of final year students. The age group of participants may also determine how students view issues regarding school activities or due to peer influence. Gender representation is also put into consideration; the number of respondents from each gender group was recorded. Table 2 shows details of the demographic data.

Table 2: Demographic Data

S/N	Description	Group	Frequency	Percentage
1	School type	Public	77	73
		Private	28	27
			105	100%
2	Age group	14 - 17	67	64
		18 - 21	37	35
		22 and above	1	1
			105	100%
3	Gender	Male	41	39
		Female	64	61
			105	100%

Source: Author's computation, (2020).

Comments

Table 2 shows the private schools have a representation of 27% in the survey while the public schools have 73% of the respondents. 67% of the respondents are within the age range of 14-17 years, followed by 37% of respondents within the age group of 18-21. Only 1% of the respondents fell within the age range of 22 and above. Sample selected for the study consists

of 41 male respondents and 64 female respondents bringing it to 39% and 61% respectively. This shows the population of females is higher than males in the area of study.

Question on the effect of Teachers' on the performance of Secondary School Students in final examinations having the following statements; Teachers do not affect my performance, Teachers are experienced, Teacher's race, gender and ethnicity do not affect my performance, Teachers are qualified, Teachers evaluation improves my performance and Teachers teaching methodology is adequate received the following responses and are analysed in Table 3.

Table 3: Effect of Teachers on the Performance of Secondary School Students in Final Examinations

S/N	Statements	Disagree	Neutral	Agree	Total %
1	Teachers do not affect my performance	31	17	52	100
2	Teachers are experienced	4	31	65	100
3	Teacher's race, gender and ethnicity do not affect my performance	10	20	70	100
4	Teachers are qualified	5	29	66	100
5	Teachers evaluation improves my performance	10	31	59	100
6	Teachers teaching methodology is adequate	11	52	37	100

Source: Author's computation, (2020).

Comments

The table 3 shows that 52% of the respondents agreed with the statement that teachers do not affect their performance while 32% felt otherwise, 17% of respondents remained neutral; This is an indication some students believe generally teachers characteristics affect their performance.

The table shows 65% of the respondents agreed that their teachers are experienced while 31% were neutral, only 4% disagreed with the statement and therefore indicating that more than average number of the students agreed that their teachers are experienced.

The table shows an overwhelming 70% of the respondents agreed that the race, gender and ethnicity of the teacher do not affect their performance while 20% remained neutral, only 10% of the respondents disagreed; This indicates that the race, gender and ethnicity of teachers do not really matter to majority of the students.

The table shows 66% of respondents agreed their teachers are qualified, 29% were neutral while only 5% of the respondents disagreed; This indicates an average number of students agree their teachers are qualified.

The table shows that 59% among the respondents agreed teachers' evaluation improves their performance while 31% remained neutral; only 10% of the respondents disagreed teachers' evaluation improved their performance. This indicates an average number of students believe that teachers evaluation serves as a guide to them and therefore improves their performance.

The table shows only 37% of the respondents agreed teachers teaching methodology is adequate and this represents a minority. 52% of the respondents were neutral and only 11% did not agree. This may be an indication that there is an issue with the teachers teaching methodology because the percentage of neutral students is up to an average number.

Table 4: Effect of Teachers on the Performance of Secondary School Students in Final Examinations by School

S/N	Statements	Private	Public	t-stat	Pvalue
1	Teachers do not affect my performance	2.18±0.88	2.32±0.9	-0.71	0.479
2	Teachers are experienced	2.62±0.56	2.57±0.51	0.416	0.339
3	Teacher's race, gender and ethnicity do not affect my performance	2.51±0.72	2.82±0.48	-2.15	0.034
4	Teachers are qualified	2.61±0.57	2.61±0.63	0.025	0.98
5	Teachers evaluation improves my performance	2.62±0.61	2.14±0.71	3.43	0.004
6	Teachers teaching methodology is adequate	2.22±0.66	2.4±0.57	-1.22	0.224

Source: Author's computation, (2020).

Comments

Table 4 shows the data on the means, standard deviations and t-value of respondents' perception on effects of teachers on student performance based on type of school. The result indicates 'Teacher's race, gender and ethnicity do not affect my performance' and 'Teachers evaluation improves my performance' are statistically significant at (p<0.05).

Table 5: Effect of Teachers on the Performance of Secondary School Students in Final Examinations by Gender

S/N	Statements	Male	Female	t-stat	Pvalue
1	Teachers do not affect my performance	1.95±0.89	2.39±0.85	-2.54	0.013
2	Teachers are experienced	2.63±0.54	2.59±0.58	0.357	0.722
3	Teacher's race, gender and ethnicity do not affect my performance	2.32±0.79	2.77±0.53	-3.5	0.007
4	Teachers are qualified	2.71±0.51	2.55±0.62	1.39	0.168
5	Teachers evaluation improves my performance	2.46±0.71	2.5±0.64	0.39	0.698
6	Teachers teaching methodology is adequate	2.29±0.68	2.25±0.62	0.33	0.74

Source: Author's computation, (2020).

Comments

Table 5 shows the data on the means, standard deviations and t-value of respondents' perception on effects of teachers on student performance based on gender. The results show only 'Teacher's race, gender and ethnicity do not affect my performance' is statistically significant at ($p < 0.05$)

Table 6: Effect of Teachers on the Performance of Secondary School Students in Final Examinations by Age

S/N	Statements	14-17	18-21	22&above	F-stat	pvalue
1	Teachers do not affect my performance	2.1±0.89	2.43±0.87	2.0±0	1.68	0.192
2	Teachers are experienced	2.6±0.58	2.62±0.55	3±0	0.26	0.77
3	Teacher's race, gender and ethnicity do not affect my performance	2.6±0.7	2.6±0.64	2.0±0	0.38	0.684
4	Teachers are qualified	2.58±0.61	2.65±0.54	3±0	0.38	0.684
5	Teachers evaluation improves my performance	2.48±0.68	2.54±0.65	2±0	0.38	0.685
6	Teachers teaching methodology is adequate	2.18±0.67	2.43±0.55	2±0	2.0	0.141

Source: Author's computation, (2020).

Comments

Table 6 shows the result on the Analysis of Variance showing the difference in response of respondent's perception on effects of teachers on student performance. The table shows no variable is statistically significant by age. Therefore, the perception of the respondent is not influenced by age.

5. Discussions

The objective of the study was to determine how teachers influence the performance of Secondary School students in final examination. The data that was gathered on the effect of teachers on the performance of Secondary School students in final examinations in Abuja Municipal Area Council (AMAC) showed the following results:

Secondary School teachers characteristics generally affect the performance of students in final examinations, this is related to previous study results showing teachers matter (Aaronson, et al., 2007); The Secondary school teachers are experienced; Majority of students in Secondary Schools think that the race, gender and ethnicity of teachers affect performance in final examination due to the P values and this is consistent with conclusions of (Ehrenberg et al., 1995; Egalite et al., 2015); The Secondary School teachers are qualified from the perspective of the students and is similar to findings showing application of teachers' professional knowledge and their level of education was found to positively affect students' academic performance (Adu & Olatundun, 2007; Didinya, et al., 2018).

The secondary school students are of the opinion that evaluation of their teachers improves their performance, this is in line with installation of educator evaluation systems that relies partly on test scores of students to measure performance of teacher (Ballou & Springer, 2015); There are indications that the teaching methodologies used by Secondary School teachers are not adequate; however, innovation in teaching methods have been shown to positively affect students' performance (Adu & Olatundun, 2007; Didinya, et al., 2018). In another study results showed the effect of teachers' pedagogical content knowledge, teaching enthusiasm, and teacher personal regulatory skills on instructional quality all had a positive effect and it influenced student learning outcomes (Kunter, et al., 2013).

6. Conclusion

The main aim of the study is to examine the effects of teachers' factor on students' performance in final examinations in Abuja Municipal Council of the Federal Capital Territory. The findings of the study were quite revealing; Final year students in AMAC Secondary Schools see their teachers as experienced, qualified and evaluate their students when necessary. The students are not concerned with the race, gender and ethnicity of their teachers even though it significantly affect students performance. However, the students have raised concerns on teachers teaching methodology which is not adequate.

The study was limited to Secondary Schools within Abuja Municipal Area Council of the Federal Capital Territory only. In view of the limitation encountered a further research is recommended on the same problem using a larger sample and in multiple locations. Another study on different teaching methodologies should be conducted to assess the teachers teaching methods. It is recommended for policy makers to adopt pedagogical content knowledge (PCK) as a teaching methodology for teaching in secondary schools.

This study had given some insights regarding the effect of teachers factor on student performance in final examinations and this has always been a major concern for all stakeholders. These final results are the main determinant of the students' ability to further their education in higher institutions of learning.

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