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IMPACT OF TEACHERS' CHARACTERISTICS AND CLASSROOM PRACTICES ON SECONDARY SCHOOL STUDENTS' ACADEMIC ACHIEVEMENT IN BIOLOGY IN ESAN WEST LOCAL GOVERNMENT AREA

***Imonsili, J.M.; & **Nwali, I.S.**

*Department of Curriculum and Instruction, Faculty of Education, Ambrose Alli University, Ekpoma, -Edo State. **Meadowhall College of Education, Lagos-Nigeria, *greatness42017@gmail.com*

Abstract

The study investigated the impact of teachers' characteristics and classroom practices on secondary school students' academic achievement in Biology in Esan West Local Government Area. The descriptive survey design was used in this study. This study covered a population of three thousand four hundred and thirty one (3431). A sample size of 172 SS 2 students representing approximately 5% drawn for the study using the purposive sampling technique. Two instruments were used in the study. The instrument used was a questionnaire titled: Teachers Characteristics Survey Questionnaire (TCSQ) and Biology Achievement Test (BAT). The reliability of the instrument was done using Pearson Product Moment Correlation Coefficient technique. Means and standard deviation were used to answer the research questions while the Analysis of Variance (ANOVA) was used to test the entire hypotheses at 0.05 level of significance. The result showed that there was a significant impact of teachers' educational qualification and there was no significant impact of teachers' continuous assessment practices on students' academic achievement in Biology in senior secondary schools in Esan West Local Government Area. It was recommended that the government should encourage less qualified teachers to improve on their qualification by giving scholarship, study leave benefits and other incentives.

Keywords: Teacher's Characteristics, Educational Qualification, Continuous Assessment Practices.

Introduction

Science and technology have proved significantly useful in man's daily struggle to control his environment and the world around him. Most developing nations as a result of visible role of science and technology now make frantic efforts to improve on the study of science and other allied subjects in their schools. Included among the basic science subjects is Biology. Biology occupies a unique position in the secondary school education curriculum because of its importance as science of life. In Nigeria, the secondary school biology curriculum is designed to promote students' investigation into natural phenomena, to deepen students' understanding and interest in biological sciences and also to encourage students' ability to apply scientific knowledge to everyday life in matters of personal, community, health and agriculture among others (Federal Ministry of Education, 2009). It is a prerequisite subject for many fields of learning, and that contributes immensely to the technological growth of the nation. Biology is introduced to students at senior secondary school level as a preparatory ground for human development, where career abilities are groomed, potentials and talents are discovered and energized (Federal Republic of Nigeria, 2013). Biology has a very high enrollment of Students in Senior Secondary Certificate Examination (SSCE) than physic and chemistry.

Despite the importance of Biology as one of a key subject in realizing any nation's scientific and technological aspirations, evidence of low achievement in the subject by Nigerian students abound (Chief Examiners' Report, 2015 - 2020) result, it shows that in 2015, only 9.51 percent scored distinction and credit and 90.49 percent had pass and fail grades. None of the results from 2015 to 2020 recorded up to 40 percent distinction/credit. This was attributed to poor instructional strategy and subsequently poor cognitive achievement. The implication of this is that Nigeria may have shortages of manpower in the area of science and technology, which may affect Nigeria's achievement of vision 2020 to become one of the 20 industrialized nations in the world.

Achievement, according to Aniaku (2012) is the quantity and quality of knowledge and skill an individual or groups acquired about a specific area of course and how that knowledge can be made use of in solving societal problems. It is however, the accomplishment of academic goals, the educational outcomes of students, the extent a student, a teacher or an instructor has achieved the stated objectives.

There is however no doubt that students' achievement is influenced by the teachers'. Several factors affecting students' academic performance from the ambit of students, the school system, teachers, the government and even their homes are quite multifaceted, complex and interwoven. As such, one can hardly attribute it to any single variable. Buttressing this, Ndubuaku, Inim, Ndudi, Udo and Abner (2020) submitted that the academic achievement of students could been attributed to various teacher characteristics.

A teacher characteristic refers to the qualities, variables or attributes possessed by a teacher that make him or her different from other teachers (Milanowski, in Omokhomion,

2021). It is a multi-dimensional construct that covers a variety of abstract and physical attributes in a teacher. The abstract qualities include, but are not restricted to, teachers' mastery of subject content, classroom management skills, locus of control, emotional intelligence, and discipline among others while their personal or physical qualities cover one or more of teachers' educational qualification, teachers' years of experience, teachers' continuous assessment practices among others. Fakeye (2018) investigated the extent to which teachers' qualification and subject mastery could predict students' achievement in English language among senior secondary students in Ibarapa division of Oyo state. The study adopted a descriptive research design. The study covered twenty (20) senior secondary schools randomly sampled. In each of the schools, a total number of fifty (50) senior secondary II students were selected to participate in the study, making a total of one thousand (1000) senior secondary II students in all. All the senior secondary II English language teachers in the selected schools also participated in the study, subject mastery (r = 74). Questionnaire and English language Achievement Test (r = 72) were used in data collection. Data collected were analyzed using frequency counts and simple percentage. Multiple regression analysis was also used for data analysis and all research questions were answered at 0.05 level of significance. The findings of the study showed that teachers' teaching qualifications has a significant relative contribution to students' academic achievement in English language.

Olaleye (2011) investigated teacher qualification as predictor of academic achievement of senior secondary school students in Osun state. The study was aimed at investigating the perception of students of teachers' qualification in relation to students' academic achievement. A population of 1,600 purposively selected SSS III students from 16 rural and urban schools were used for the study. Questionnaire tagged Teachers' Qualification and Students' Academic Achievement (TQSAA) was used to elicit information from the students. Data collected were analyzed using simple percentage, descriptive survey research design, Pearson product moment correlation coefficient and chi-square statistical tool was used to test the hypotheses generated in the study. The findings of the study showed that teachers' qualification was a predictor of students' academic achievement in Osun state senior secondary schools.

Weginsky (2017) examined the impact of teacher qualification on students' academic achievement in American high schools. The study adopted a descriptive research design type and the study covered twenty (20) secondary school teachers randomly sampled. In each of the schools, a total number of fifty (50) students were used. The instrument for the study was questionnaire. Data collected were analyzed using frequency counts, simple percentage and multiple regression analysis. The findings revealed that teachers' input do impact students' academic achievement. The findings further revealed that the greatest impact on students' academic achievement come from classroom practices and professional background and development that support them.

Akinsolu (2017) investigated the number of qualified teachers and its relationship to students' academic performance in public secondary schools in a sample of selected local government areas of Osun state. The study used a descriptive research design and a post-havoc data set. An instrument titled Quality and Quantity of Teachers' and Students' Academic Performance (QQTSAP) was used for the study. Twenty-one (21) public secondary schools, one in each local government area from a population of 31 local government areas in the state were sampled. SSS certificate examination results from 2000/2001 to 2004/2005 academic years were used to analyze students' academic performance and this reflected some concern in the school system. The data were analyzed using Analysis of Variance (ANOVA) and Spearman Rank Correlation Coefficient to test the operational hypotheses. The study indicated that teachers' qualification was significantly related to students' academic performance in Osun State secondary schools.

Educational qualification is one attribute of a teacher that can be described along two main axes namely teachers' professional qualification and teachers' academic qualification. The former - professional qualification refers to those teachers who belong to professional bodies of education such as Nigerian Union of Teachers (NUT), Teachers Registration Council of Nigeria (TRCN) and several others. The latter (teachers' academic qualification), constitute teachers' qualification from an institution of learning such as a secondary school, polytechnic, college of education, and university, with attendant certificate of learning to show. According to Abe (2014), teachers with low educational qualifications are not likely to understand pedagogy and methods of imparting what they know or have learnt effectively.

Arinde (2017) investigated educational services, teacher quality and students' academic performance in public senior secondary schools in North Central Nigeria. The Correlational survey design and ex-post factor approach were adopted for the study. Simple random sampling technique was used to select 3,360 participants out of 8,800 target population, (3,360 teachers and 280 principals) the respondents were selected from 280 (35%) schools out of the 800 Public Senior Secondary Schools in the North Central Zone of Nigeria as at the time of the study. Three research-designed instruments, namely, Availability of Educational Service Questionnaire (AESQ), Teacher Quality Assessment Questionnaire (TQAQ), and Students' Academic Performance (SAPP), were used to collect relevant data for the study. Means and percentage were used to answer the research questions raised, while multiple regression analysis was used to test the main hypothesis. In addition, Pearson Product Moment Correlation Statistical Method was used to test the operational hypotheses, all at 0.05 significance level. The findings revealed that the fitted Multiple Regression Model was significant at 0.05 level of significance, indicating that there was significant relationship between teacher quality and student' academic performance (p-value < 0.05, R2=0.51). The result further indicated that there was no significant, positive and strong relationship among teachers' professional qualifications, teachers' experience and students' academic performance ($r=0.71$, $p<0.05$ and $r=0.73$, $p<0.05$) respectively. Hence, the study found that teachers' educational qualification impact students' academic achievement.

Kosgei (2013) established the relationship between teachers' characteristics and students' academic achievement in Biology in Ghana. The study focused on the following independent variables: teacher qualification and teacher experience and their effect on student academic achievement. The study applied a causal comparative research design. The study was conducted in Nandi South District. The target population comprised of Biology teachers of all the 26 public secondary schools. A questionnaire was used for data collection. Data was analyzed using descriptive and inferential statistical techniques. The study, among other findings, showed that there was no significant relationship between teachers' qualification and student academic achievement in Biology ($p>0.05$). Hence, Kosgei (2013) found that teachers' qualification had no impact on students' academic achievement in Biology.

Kimani, Kara and Njagi (2017) investigated selected teachers' demographic characteristics and classroom instructional practices and students' academic achievement in selected secondary schools in Nyandarua County, Kenya. One hundred and fifty three (153) teachers selected randomly from eighteen (18) schools in three (3) districts in the county participated in the study. The schools were categorized as above average, average and below average based on their aggregate performance in Kenya Certificate of Secondary Education (KCSE) in the last three years. In each category, two schools per district were selected. Data were collected using a questionnaire developed by the researchers. Linear regression analysis and one-way ANOVA were used to test the relationship between the selected variables and performance in KCSE at $p<0.05$. The study found that teachers' qualifications were not significantly related to students' academic achievement.

Continuous assessment is a device for monitoring and improving the learning and general performances of students based on systematic collection of comprehensive and diagnostic data over a specified period of time and as such, is said to be cumulative (Nneji, Fatade, Awofala & Awofala, 2012). Its comprehensiveness, periodic, cumulative and guidance oriented features enhance the possibility for both the students and the teacher to get the requisite information that would guide the future development of the students in terms of subjects to be taken and career aspirations. Hence, this shows that continuous assessment is aimed at ensuring desirable changes in a learners' behaviour by the end of a lesson, school term or year.

Iwu, Osuoha, Onoja, Oguwuike and Egeruoh (2012) in a descriptive survey of attitude and awareness of teachers towards continuous assessment practices in tertiary institutions in Imo State, Nigeria found that test, assignment and project are the continuous assessment techniques frequently used to assess students while the attitude of the teachers toward continuous assessment varied depending on the capabilities of the teacher, support from the school and cooperation from the students. Result further showed that dissemination of pre-evaluation information by teachers affected students' academic performance.

Nneji, Fatade, Awofala and Awofala (2012) investigated the attitudes of 305 Science, Technology and Mathematics (STM) teachers towards assessment practices in Nigeria. The sample was selected through stratified and random sampling techniques from 171 Senior Secondary Schools in three Local Government Areas of Lagos State and data were collected

using a questionnaire. The instrument required the STM teachers to indicate the extent of their agreement or otherwise, on a five–point Likert attitude measuring scale, to a set of 26 statements made on various assessment practices. Frequency counts and percentages were used to obtain a global picture of teachers_ attitudes towards assessment practices, while the Chi-square (X^2) statistic was used to find out whether there was any significant difference in the gender, experience or professional training of teachers and their attitudes towards assessment practices. Findings showed that a higher proportion of the STM teachers seemed to display positive relationship between dissemination of pre-evaluation information by teachers and students academic performance.

Awofala and Babajide (2013) investigated the attitudes of 339 pre-service Science, Technology and Mathematics (STM) teachers towards continuous assessment practices in Nigeria within the blueprint of a descriptive survey research design in a conventional university. Data were collected using an instrument tagged " pre-service STM teachers' attitudes toward CA questionnaire" in which respondents were to indicate the extent of their agreement or otherwise, on a modified five–point Likert attitude measuring scale, to a set of 39 statements made on various assessment practices. Results showed that dissemination of pre-evaluation information by teachers significantly impacted students' academic performance.

Alufohai and Akinlosotu (2016) investigated knowledge and attitude of secondary school teachers towards continuous assessment (CA) practices in Edo Central Senatorial District, Nigeria. The study was undertaken to determine the impact of gender, age, years of experience and area of educational specialization on teachers' attitude towards CA practices in secondary schools in the district. 543 teachers were drawn from the population of 1084 teachers across the district. However, 512 questionnaires were recovered and used for analysis. Mean and standard deviations were used to analyze the research questions while the t-test statistics was used to test the hypotheses. Findings showed that majority of the teachers, perceived CA practices as a systematic and comprehensive system of evaluation but have inadequate knowledge of its cumulative and guidance oriented characteristic. Results also showed that teachers' attitude towards CA practices was negatively skewed. The authors concluded based on findings, that the use of data gathering instrument by teachers was highly expedient and relevant in promoting students' learning outcome or academic achievement.

Clement and Ayibatonye (2014) investigated the causes of science teachers' indifference to the implementation of continuous assessment in secondary schools in Rivers State. The population of the study was the whole science teachers teaching in the secondary schools. From the population a sample of 200 science teachers were selected through a stratified random sampling technique. Three research questions and two null hypotheses were formulated to guide the study. The instrument titled "Teacher Continuous Assessment Attitude Rating Scale (TCAARS)" was used to generate data. The instrument was validated and its reliability was tested using Kudar Richardson 20 formula r = 0.76. The data collected were analyzed; using simple percentages to answer the research questions while Analysis of

Variance (ANOVA) was used to test the null hypotheses. From results analyzed, it was found that many science teachers were not professionally qualified and as such, lacked the morale and skills to construct and administer CA test in Secondary Schools. Majority of the teachers also demonstrated low effort in using some of the assessment instruments; consequently, assessment was haphazardly carried out.

Odili (2014) investigated the continuous assessment (CA) skills competences of secondary school teachers in Delta state. This was to ascertain their ability to carry on with CA which is the mode of evaluating learning outcomes in the schools. A sample of 102 teachers were randomly selected using stratified sampling approach. A 20-item observation schedule that assessed teachers' competences in two areas of CA, viz test construction and use of assessment outcomes to guide learning, was developed by the researcher for the study. It used a 4-point scale to rate teachers' competences on the skills. A one-way Multivariate Analysis of Variance (MANOVA) was used for data analysis. The independent variables were teachers' level of experience and training in teaching. They were considered at two levels respectively. The dependent variables were test construction and use of assessment outcomes. The results among other findings showed that teachers' experience and training did not significantly impact their competences in test construction and use of assessment outcomes.

Academic achievement is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important. Bossaert, Doumen, Buyse and Verschueren (2011) defines academic achievement as student's success in meeting short or long term goals in education in the big picture according to the authors, academic achievement means completing high school or earning a college degree. A student who earns good grades or awards in science has achieved in the academic field of science. From the background above, this study seeks to examine impact of teachers' characteristics and classroom practices on secondary school students' academic achievement in Biology in Esan West Local Government Area, Edo State

Many researchers, teachers, parents and government have traded blames on low achievement of students and adduced various reasons for it including: parental inadequacies, social, student related factors, teacher incompetence and quality deficiency among others. The situation equally questions teachers' evaluation and continuous assessment practices in Esan West Local Government, Area.

Alufohai (2011) and Alufohai and Ibhafidon (2015) conducted a study on teachers' personal characteristics and the academic achievement of students in senior secondary schools in Edo State and found that teachers' characteristics – their educational qualification, experience, age, marital status and gender had impact on students' academic achievement. From above issue, there was need to investigate if teachers characteristics and classroom practices has impact in the academic achievement of students.

The main purpose of this study was to examine impact of teachers' characteristics and classroom practices on secondary school students' academic achievement in Biology in Esan West Local Government Area.

Research Questions

Two research questions guided the study:

1) What is the impact of teachers' educational qualification on students' academic achievement Biology in Esan West Local Government Area?
2) What is the impact of teachers' continuous assessment practices on students' academic achievement in Biology in Esan West Local Government Area?

Hypotheses

Two hypotheses were formulated and tested in this study:

1) There is no significant impact of teachers' educational qualification on students' academic achievement in Biology in Esan West Local Government Area.
2) There is no significant impact of teachers' continuous assessment practice on students' academic achievement in Biology in Esan West Local Government Area.

Methodology

The descriptive survey design was used in this study. A descriptive research designs help a researcher to explain how variables change with the help of primary data collected from the field (Akindele, 2004). Hence, this design was considered suitable because the study was concerned with evaluating how one variable changes with respect to another variable without controlling the outcome under any laboratory condition. The population of the study comprised of all students in public senior secondary school in Esan West Local Government Area of Edo State. There were sixteen secondary schools in the local government with a population of three thousand four hundred and thirty one (3431). The sample size of the study was 100% of the teachers due to the fact that the population of the teacher was small and 5% of the student's population. Simple random sampling technique was used in selecting the 5% of students in the public secondary schools which was 172 students in Esan West Local Government Area in Edo State. The instrument for data collection was a questionnaire titled: Teachers Characteristics Survey Questionnaire (TCSQ). This instrument was designed for Biology teachers in public secondary schools in the Local Government Area, Edo State. The instrument (TCSQ) consisted three sections, namely: Sections A and B. Section A was used to elicit the personal demographic data of teachers. These demographics consisted: name of school, the educational qualification and their years of teaching experience as Biology teachers. The items in Section B part of TCSQ was adopted from the work of Alufohai and Akinlosotu (2016). The items was adopted from Teachers' Continuous Assessment Knowledge and Attitude Questionnaire (TCAKAQ) as used in the work of Alufohai et al (2016) which is titled: Knowledge and attitude of secondary school teachers towards continuous assessment practices in Esan West Local Government Area of Edo State. The aforementioned instrument B contains 15-items designed to elicit information on teachers' continuous assessment practices. The continuous assessment practices cover three constructs: dissemination of pre-evaluation information by teachers (items 1-5), teachers' assessment

feedback (items 6-10), and teachers' use of data gathering instruments (items 11-15). The instrument has an overall Cronbach reliability alpha of 0.78. Since the original instrument was previously administered to teachers. To ensure that the instrument, face and content validity was carried out by the researcher. The face validity was carried out by the researcher who will give a copy of the instrument to the supervisor for scrutiny. The internal consistency of the instruments will determined with the use of the Split-Half Reliability procedure. To ascertain the reliability of the instrument, a twenty (20) member trial test group will be set up. The members of the trial test group will be Senior Secondary school one students drawn from outside the study sampled. These set of students were administered the instruments to fill and their responses thereafter were collated and split into a set of odd and even numbers. The item responses on odd and even numbers will be correlated using a parametric test called the Pearson Product Moment Correlation Coefficient (r) technique. After computation, the Pearson Product Moment Correlation Coefficient (r) produced an r-value known as the reliability coefficient. A reliability coefficient of 0.79 was obtained which proved that the instrument was reliable for use. The administration of the instrument was carried out by the researcher with the assistance of subject teachers in the school covered for the study. Descriptive statistics such as mean ($\overline{X}$) and standard deviation was used to answer the research questions while the Analysis of Variance (ANOVA) was used to test the entire hypotheses at 0.05 level of significance.

Results

Research Question 1: What is the impact of teachers' educational qualification on students' academic achievement in Biology in Esan West Local Government Area?

Table 1: Summary of Mean and Standard Deviation Score on Students' Academic Achievement in Biology with respect to teachers' Educational Qualification in Senior Secondary Schools in Esan West Local Government Area

Teachers. Educ .qualification	N	Mean	Std. Deviation
Unqualified teachers	72	17.68	7.213
Qualified teachers	100	23.71	9.235
Total	**172**	**20.693**	**8.224**

The result in table 1 showed that the academic achievement mean score of Biology students taught by unqualified teachers was 17.68 while academic achievement mean score of Biology students taught by qualified teachers was 23.71. This clearly indicates that Biology students taught by qualified teachers had the higher academic achievement than those taught by unqualified teacher in senior secondary schools in Esan West Local Government Area.

Research Question 2: What is the impact of teachers' continuous assessment practices on students' academic achievement in Biology in Esan West Local Government Area?

Table 2: Summary of Mean and Standard Deviation Score on Teachers' Continuous Assessment Practices and Students' Academic Achievement in Biology in Senior Secondary Schools in *Esan West Local Government Area*

Teachers' Continuous Assessment (CA) status	N	Mean	Std. Deviation
Poor CA practice	72	33.26	8.236
Good CA practice	100	31.11	7.325
Total	**172**	**32.185**	**7.780**

The result in table 2 showed that the academic achievement mean score of teachers with poor continuous assessment practice was 33.26 while mean score of teachers with good continuous assessment practice was 31.11. This clearly indicated that students taught by teachers with good continuous assessment status had the higher academic achievement in Biology than those taught by teachers with poor continuous assessment in Esan West Local Government Area.

Testing of Hypotheses

Hypothesis 1: There is no significant impact of teachers' educational qualification on students' academic achievement in Biology in Esan West Local Government Area.

Table 3: Analysis of Variance on Teachers' Educational Qualification and Students' Academic Achievement in Biology in Senior Secondary Schools in Esan West Local Government Area

Source	Type III Sum of Squares	Df	Mean Square	F	P-value
Corrected Model	3620.843[a]	1	3620.843	25.605	.000
Intercept	456837.600	1	456837.600	153.063	.000
Teachers Education qualification	**3620.843**	**1**	**3620.843**	**25.605**	**.000**
Error	48651.025	170	80.282		
Total	1193860.000	172			
Corrected Total	53441.868	171			
(I) Teachers Educ. qualification	(J) Teachers Educ. Qualification		Mean Difference (I-J)	Std. Error	Sig.[b]
Unqualified teachers	Qualified teachers		-6.022*	.720	.000
Qualified teachers	Unqualified teachers		6.022*	.720	.000

Unqualified teachers ($\overline{X}$ = 17.68) Qualified Teachers ($\overline{X}$ = 23.71)

Result in table 4 showed that the calculated f-value of 25.605 for teachers' educational qualification is significant since the probability value (p-value) is less than 0.05 alpha level

(p<0.05). Thus, the null hypothesis is rejected. This shows that there is a significant impact of teachers' educational qualification on students' academic achievement in English language in senior secondary schools in Edo Central Senatorial District. Furthermore, the mean difference score in absolute terms (6.022) was significant (p<0.05) as students taught by qualified teachers had higher mean achievement score in Biology ($\overline{X}$ = 23.71) than their counterparts taught by unqualified teachers ($\overline{X}$ = 17.68). This implies that teachers' educational qualification had a significant impact on students' academic achievement in Biology.

Hypothesis 2: There is no significant impact of teachers' continuous assessment practice on students' academic achievement in Biology in Esan West Local Government Area.

Table 4: Analysis of Variance on Teachers' Continuous Assessment (CA) Practice on Students' Academic Achievement in Biology in Senior Secondary Schools in Esan West Local Government Area.

Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**P-value**
Corrected Model	22.029[a]	1	22.029	.321	.000
Intercept	1200014.012	1	1200014.012	12817.720	.000
Teachers' CA status	**22.029**	**1**	**22.029**	**.321**	**152**
Error	25322.031	170	1.010		
Total	1193860.000	172			
Corrected Total	21241.860	171			
(I) Teachers' CA status	(J) Teachers' CA status		Mean Difference (I-J)	Std. Error	P-value
Poor CA practice	Good CA practice		.122	.235	.326
Good CA practice	Poor CA practice		-.122	.235	.326

Poor CA practice ($\overline{X}$ = 33.26) Good CA practice ($\overline{X}$ = 31.11)

Result in table 4 showed that the calculated f-value of 0.321 for teachers' continuous assessment practices is not significant since the probability value (p-value) is greater than 0.05 alpha level (p>0.05). Thus, the null hypothesis is retained. This shows there is no significant impact of teachers' continuous assessment practice on students' academic achievement in Biology in senior secondary schools in Esan West Local Government Area. Further indications from the mean difference score in absolute terms (0.235) was insignificant

($p>0.05$) as students taught by teachers with good and poor CA practices had approximately the same mean achievement score difference in Biology ($\overline{X}$ of 33.26 approximately same with 31.11).This implies that teachers' continuous assessment practices does not have significant impact on students' academic achievement in Biology.

Discussion of Findings

The result in table 3 showed that there is a significant impact of teachers' educational qualification on students' academic achievement in Biology in senior secondary schools in Esan West Local Government Area. The study had therefore shown that teachers' qualification promoted students' academic achievement in Biology. The result of this finding agreed with that of Fakeye (2018) who found that teacher' teaching qualifications have a significant relative contribution to students' academic achievement. Similarly, the result is in line with that of Olaleye (2011) who revealed that teachers' qualification is a predictor of students' academic achievement senior secondary schools. Also, the findings supported that of Weginsky (2017) who asserted that the greatest impact on students' academic achievement come from classroom practices and professional background and development that support them. Furthermore, the result is in line with that of Akinsolu (2017) who noted that teachers' qualification is significantly related to students' academic performance.

On the contrary, the result disagreed with that of Arinde (2017) who observed that there is no significant, positive and strong relationship among teachers' professional qualifications, teachers' experience and students' academic performance. Also, the result disagreed with that of Kosgei (2013) who reported that there was no significant relationship between teachers' qualification and student academic achievement in Biology. Moreso, the result also, disagreed with that of Kimani, Kara and Njagi (2017) who noted that teachers' professional qualifications were not significantly related to students' academic achievement.

The result in table 4 showed that there is no significant impact of teachers' continuous assessment practices on students' academic achievement in Agreement in senior secondary schools in Esan West Local Government Area. The result of this study is in line with that of Clement and Ayibatonye (2014) who revealed that, many science teachers are not professionally qualified and as such lacked the morale and skills to construct and administer CA test in Secondary Schools. Majority of the teachers also demonstrated low effort in using some of the assessment instruments; consequently, assessment was haphazardly carried out.

On the contrary, the findings does agree with that Also, the result disagreed with that of Byabato and Kisamo (2014) that assessment feedback among teachers promoted students' academic performance. It also disagreed with that of Iwu, Osuoha, Onoja, Oguwuike and Egeruoh (2012) who stated that dissemination of pre-evaluation information by teachers affected students' academic performance. This finding does not support that of Nneji, Fatade, Awofala and Awofala (2012) who revealed that a higher proportion of the STM teachers seemed to display positive relationship between dissemination of pre-evaluation information by teachers and students academic performance.

Conclusion

Based on the result of the findings, it was concluded that teachers' educational qualification promote the academic achievement of senior secondary school students in Biology in Esan West Local Government Area and continuous assessment practices had no impact on the academic achievement of senior secondary school students in Biology. This is because only qualified teachers demonstrated high mastery of knowledge on continuous assessment practice for improved Biology academic achievement of their students.

Recommendations

Based on the findings, the following recommendations were made:

1) The government should encourage less qualified teachers to improve on their qualification by giving scholarship, study leave benefits and other incentives.
2) Head teachers should endeavour to train teachers for effective planning on their evaluation and assessment in a continuous, cumulative and guidance oriented manner in order to avoid haphazard assessment practices.

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