UNIJERPS
Unizik Journal of Educational Research and Policy Studies VOL.21 (1);
January-June, 2026 https://unijerps.org
2023 Impact Factor: **6.834;** 2022 ***Impact Factor***: 5.156; ***2021 Impact Factor: 5.641;***
2020 Impact Factor: 5.355. *Indexing and Impact Factor URL: http://sjifactor.com/passport.php?id=21363*

TEACHERS' QUALITY AND WORK ENVIRONMENT AS CORRELATES OF ACADEMIC ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS IN DELTA STATE, NIGERIA

Ike, Ann Ngozi Ph.D.
ikengozi78@yahoo.com

Department of Educational Foundations
Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State, Nigeria

ABSTRACT

The study examined teachers' quality and work environment as correlates of academic achievement among secondary school students in Delta State, Nigeria. It specifically ascertained the extent of relationship between teachers' educational qualification/experience and students' academic achievement and also the relationship between physical infrastructural facilities and student's academic achievement. Correlational research design was adopted for this study. The population of the study comprised 8,681 SS2 students in 18 public secondary schools in nine Local Government Areas of Delta State. A sample size of 434 SS2 students was drawn for the study using multistage sampling procedure. Two sets of instruments namely: 'Teachers' Quality Questionnaire (TQQ)' and 'Work Environment Questionnaire (WEQ)' were used for data collection. The instruments were subjected to face validation by three experts made up of two specialists in Educational Management and an expert in Measurement and Evaluation. The construct validation of the instruments was determined using factor analysis. The internal consistencies of the instruments were determined using Cronbach Alpha which yielded overall reliability indices of 0.791 for TQQ and 0.795 for WEQ respectively. Pearson Product Moment Correlation Coefficient was used to answer the research questions. The findings of the study revealed among others that there is high positive relationship between teachers' educational qualification/experience and students' academic achievement in public secondary schools in Delta State, Nigeria, and also a moderate positive relationship between physical infrastructural facility and students' academic achievement in public secondary schools in the State. The study among others recommends that Delta State government through the State Ministry of Education should provide study grant and leave with pay for teachers to enable them enroll into educational institutions to upgrade their qualification and knowledge that will improve the academic achievement of students.

Keywords: Teachers' quality, Work environment, Cronbach Alpha, Correlates, Academic achievement

Introduction

Education is regarded as the heartbeat of any nation. The national development is largely determined by the quality of her education. The pursuit for any qualitative education has become the main concern of most Nigerians since education is the bedrock for the nation building (FRN, 2013). The issue of quality in the education sector has been of paramount importance in the society in recent times. The demand for quality education is not out of place considering the huge sum of money that goes into the sector especially at secondary school level. Secondary education is a very critical level of any educational system as it is the bedrock on which higher education is built upon. It is therefore necessary to examine students periodically to determine their academic achievement.

Academic Achievement is the level of assimilation of knowledge and skills by the student imparted through the teacher, people or materials around them which is mostly measured by administering test or examination to students. Academic Achievement also refers to a specified level of attainment or proficiency in academic work as evaluated by the teachers, standardized tests or by a combination of both (Steinmayr *et al*., 2014). Academic achievement is a students' academic standing at any given time (Adeyemi and Bolariwa, 2013). The result of the test or examination according to Katherine (2016) will show their level of achievement academically and it will be a yardstick for decision making by the principal, teachers, parents and even the government.

The problem of poor academic achievement among Secondary School students in both internal and external examinations in Delta State is worrisome. The unhappiness of the public about this poor achievement becomes more prominent following the annual release of the external examinations. The students' result does not match the government and parental investment. Hence Ayeni (2017) reported a decline in students' academic performance in public examinations in Nigeria.

Teachers' quality plays a key role in enhancing students learning outcome (Wallace *et al*., 2016). Previous studies have consistently shown that what teachers do in the classroom meaningfully influence students learning, and having effective teachers helps students to reach their full potential (Maulana *et al*., 2015). Teachers are seen by the society as the second parents to students. Large number of students take whatever piece of information and knowledge imparted on them by teachers, and for this reason, we need to have competent and reliable teachers in secondary schools in Delta State. The idea that 'better teachers lead to better test scores has resulted in a range of policy actions aimed at lifting the performance of teachers, thus throwing the concept of teachers' quality into the limelight (Berkovich & Bendiel, 2018).

For the purpose of this research, the teacher's Educational Qualification and Teaching Experience were examined. Teachers' educational qualification is very important because it seems to directly affect

students' teaching and learning. Well-qualified teacher needs to acquire recognized certificate that is pertinent to the subject they teach. Education cannot be provided by just anybody. It requires a teacher who plans and delivers the lesson in such a way that objectives can be achieved. A teacher who is not qualified and experienced cannot prepare students for external examinations such as West African Secondary School Certificate Examination (WASSCE) because it is unlikely that they will pass.

Teaching experience tends to increase teacher effectiveness and students' academic achievement. The years invested by a teacher in the teaching career which produces a positive or negative influence on the students' academic performance is known as teacher's experience. Experienced teachers are expected to do better in teaching than the less experienced ones (Tera and Podolsky, 2016).

Work environment is the setting, social aspects and physical conditions in which individuals perform their job. Work environment is used synonymously with School environment in this research because the work environment of a teacher is the school (learning) environment of a student. School environment is the totality of the material resources used in school-by-school administrators to facilitate the teaching and learning activities for both teachers and students to achieve educational goals (Olugbenga, 2019). It is believed that students acquire most of their knowledge through the interaction with facilities provided in the environment for learning. A study by Gilavand and Jamshidnezhad (2016) has established several factors in the learning environment that significantly affect students' learning outcomes, such as open space, noise in classrooms, inadequate light, unsatisfactory temperature, overcrowded classes, improper classroom layout and misplaced boards. All these constitute factors that disrupt students' academic learning. Gilavand and Jamishidnezhad (2016) reiterated that in designing educational setting, the school management must take into account the environmental factors. Katherine (2016) opined that numerous factors affect students academically including the personal factors, their interactions with others such as parents, teachers, administrators and the larger surroundings. Tope, (2012) opined that school environment is an essential aspect and unless schools are well situated, buildings adequately constructed and equipment's adequately utilized and maintained, much teaching and learning may not take place. The availability of well-equipped school workshops and laboratories with modern machines tools and materials for practices are necessary in secondary schools and should be adequately provided to enhance students' academic achievement (Okwelle, 2016).

It seems that work environment to a large extent determines how a student behaves and interacts. The desires for both qualitative and quantitative education have increased the quest for providing an effective and conducive learning environment for teaching and learning. In Delta State, there is an increase in the number of students' enrollment in schools, especially public schools with little or no regards to improving

the learning environment as to enhance students' academic achievement. Learning environment is believed to be a determinant factor that contributes to stimulate the outcomes of learning that facilitates academic performance by encouraging effective teaching and learning (Duruji et al., 2014). The environmental difference and the difference in the quality of instruction from one school to another tend to create differences in the level of knowledge acquisition of the students. Hence, the learning facilities in the work environment seem to expose the students to a better academic achievement. The school environment should have good infrastructural development, adequate trained teachers, good leadership and adequate instructional materials for effective learning (Nwonyuku, 2018). School buildings and grounds are the main factors responsible for the academic uplifting of students' performance; they must be designed to provide healthy items, sanitation, safe water, airy and good lighting rooms, safe playgrounds, violence prevention and emergency response (Stronge, 2018).

For this research, work environment in secondary schools includes Physical Infrastructural facilities, school location and class size. Physical infrastructure stands for the physical facilities of the school. It includes school buildings (Library, Laboratories, administrative blocks, classrooms, sanitary facilities, and school hall), Instructional materials, Playgrounds, classroom furniture, and safe water which are essential in imparting knowledge. The physical appearance and general condition of school physical facilities are the striking basis upon which many parents and friends of any educational institution make initial judgment about the quality of what goes on in the school. Hence, ensuring an adequate and sufficiently equipped infrastructure is key to, so that teaching takes place in acceptable conditions and learning can flourish (UNESCO, 2018). Most public schools in Delta State lack basic infrastructure such as laboratories, libraries, electricity, classroom, sanitary facilities, school hall, staff rooms etc. In some public secondary schools, the infrastructures are in deplorable condition, others below acceptable standards and in few cases, nonexistent. Ogunode and Agwor (2021) viewed school infrastructural facilities as social capital within the school environment. They also reiterated that reasons responsible for inadequate infrastructural facilities are inadequate funding of secondary schools, poor infrastructural facilities planning, and poor qualities of infrastructural facilities, corruption, ineffective monitoring and evaluation of infrastructural facilities, increased student population and damages of facilities by students in secondary schools.

Statement of the Problem

There seems to be poor performance of teachers in public secondary schools in Delta State, Nigeria. This is evident in the poor performance of students in both internal and external Examinations such as West African Secondary School Certificate Examinations (WASSCE) lately, whose outcome is used by many scholars as a yardstick for measuring the entire secondary

education. The researcher observed that some of the students at the end of session could not be promoted to the next class due to poor performance while some that graduated from this public secondary school over the years could not gain admission into the University. The academic quality in Public Secondary Schools in Delta State has fallen considerably below expectations. This might be narrowed down to teacher's lack of educational qualification, teaching experience, knowledge of subject matter, communications skills and teaching methods.

There has also been an outcry from stakeholders in the educational sector, parents and concerned individuals about the poor provision of basic facilities for teaching and learning. This outcry is depicted by the deteriorating poor performance of students in external examinations. The researcher has observed with dismay that the school environment of most of the school in the study area is nothing to write home about. The physical facilities are in dilapidated conditions, with large class sizes, few classroom furniture and noisy environment. If this situation is allowed to continue, it may undermine the objectives of secondary education which is the bedrock for university education. It is on this premise that the researcher was motivated to examine the extent to which teacher quality and work environment determine the academic achievement of secondary school students in Delta State, Nigeria.

Specifically, the study sought to:

i. ascertain the extent of relationship between teachers' educational qualification/experience and students' academic achievement;
ii. ascertain the extent of relationship between physical infrastructural facilities and student's academic achievement.

Methodology

The population of the study consisted of 8,681 SS2 students from 18 public secondary schools in nine local government areas of Delta State, Nigeria.

The sample for this study was 434 senior secondary students selected from 18 public secondary schools across the 25 Local Government areas of Delta State, Nigeria, using multistage sampling technique. In the first stage, simple random sampling technique was used to select nine local government areas out of the 25 local government areas of the state namely: Aniocha North, Aniocha South, Oshimili North, Oshimili South, Ethiope West, Okpe, Warri North, Bomadi, Isoko North.

In the second stage, simple random sampling was used to select two secondary schools each from the nine local government areas selected for the study. This gave a total of 18 secondary schools selected for the study. The third stage was the selection of 5% of the total population of SS2 students from each of the 18 secondary schools using simple random sampling technique. In all, a total of 434 SS2 students were utilized for the study.

The Instrument for data collection was structured questionnaire developed by the researcher which was titled Teacher Quality

Questionnaire (TQQ) and Work Environment Questionnaire (WEQ).

A 4-point rating scale for the respondents was employed thus:
Very Great Extent (VGE) – 4 points
Great Extent (GE) - 3 points
Low Extent (LE) - 2 points
Very Low Extent (VLE) - 1 point

Students' academic achievement was assessed in this study using the mathematics examination results administered to students in SS2 by the Ministry of Education, 2022/2023 academic session in public Secondary Schools in Delta State.

Method of Data Collection

The researcher with the help of five research assistants who are teachers in secondary schools in the study area administered 434 copies of the questionnaires directly to respondents. The research assistants were briefed on the nature and purpose of the study to help them answer questions and provide clarifications. The copies of the questionnaires were administered to students in their various schools. On the spot method of completion and retrieval was adopted but follow up visits were made where the respondents could not complete it on the spot. The administration of the Questionnaires lasted for three weeks. A total of 434 copies of questionnaire were administered to students and 421 were properly filled and successfully retrieved, indicating 97% return. At the end of the exercise, 421 copies of the questionnaire retrieved were used for data analysis.

Method of Data Analysis

Data were analyzed using Pearson Product Moment Correlation Co-efficient for the research questions and T-test for the hypotheses. The justification for Pearson Product Moment Correlation Co-efficient was to ascertain the direction of association that exists between the variables of the study. The basis for the T-test was to determine whether there is significant difference between the means of the variables (to determine whether a process or treatment actually has an effect on the population (students), or whether the two groups (independent variables) are different from one another. For the research questions, the coefficient r and the size of the relationship will be interpreted using the interpretation of a correlation coefficient by Downie and Heath cited in Nworgu (2015) as shown: 0.80 and above for high, above 0.30 and below 0.80 for moderate and 0.30 and below for low respectively. For decision on the hypotheses, if P – value is equal to or less than level of significant value of 0.05, the null hypotheses will be rejected, but if P – value is greater than level of significant value at 0.05, the null hypotheses will not be rejected. The SPSS version 27 (v27) was used in data analysis.

Variables	N	Teachers' Educational Qualification	Students' Academic Achievement	Remarks
Teachers' Educational Qualification	421	1.00	.817	High Positive Relationship
Students' Academic Achievement	421	.817	1.00	

Results and Discussion

Extent of the relationship between teachers' educational qualification and students' academic achievement in public secondary schools in Delta State, Nigeria. This was achieved through the use of Pearson's Moment Product correlation coefficient (r).

As shown in Table 1, Pearson's correlation coefficient (r) of .817 was obtained. This showed that there is high positive relationship between teachers' educational qualification and students' academic achievement in public secondary schools in Delta State, Nigeria. This indicated that the higher teachers' educational qualification will increase the students' academic achievement. This agreed with the finding of Adamu and Mai'anguwa (2020) which revealed that teachers' educational qualification has high positive relationship with students' academic achievement. Similarly, this finding is also in tandem with the findings of Agbor, Onnoghen and Etan (2023) which revealed that there is a significant relationship between lecturers' education qualifications and students' academic achievement.

(ii). Extent of the relationship between teachers' experience and students' academic achievement in public secondary schools in Delta State, Nigeria. This was also achieved through the use of Pearson's Moment Product correlation coefficient (r).

Table 2: Pearson (r) on Relationship Teachers' Experience and Students' Academic Achievement

Variables	N	Teachers' Experience	Students' Academic Achievement	Remarks
Teachers' Experience	421	1.00	.861	High Positive Relationship
Students' Academic Achievement	421	.861	1.00	

Table 2 revealed that Pearson's correlation coefficient (r) of .659 was obtained. This showed that there is high positive relationship between teachers' experience and students' academic achievement in public secondary schools in Delta State,

Nigeria. This revealed that the teachers with higher experience will improve the students' academic achievement more than the less experienced ones. This finding is in line with the report of an earlier study of Ewetan and Ewetan (2015) which revealed that there was high relationship between teachers' years of experience and students' academic performance in the selected senior secondary schools. Job experience allows teachers to perform variety of roles and encounter different learners which enable them acquire competencies of meeting individual learning needs of students to improve their academic achievement.

(iii). Extent of the relationship between physical infrastructural facility and students' academic achievement in public secondary schools in Delta State, Nigeria. This was estimated through the use of Pearson's Moment Product correlation coefficient (r).

Table 3: Pearson (r) on Relationship Physical Infrastructural Facilities and Students' Academic Achievement

Variables	N	Physical Infrastructural Facility	Students' Academic Achievement	Remarks
Physical Infrastructural Facility	421	1.00	.743	Moderate Positive Relationship
Students' Academic Achievement	421	.743	1.00	

Table 3 shows that Pearson's correlation coefficient (r) of .743 was obtained. This implied that there is moderate positive relationship between physical infrastructural facility and students' academic achievement in public secondary schools in Delta State, Nigeria. This indicated that a better physical infrastructural facility in a school will increase the students' academic achievement. This affirmed the finding of Adebuleand Adeusi (2017) which showed that there was high positive relationship between school facilities and students' academic performance. The possible explanation for this finding is that physical infrastructural facility improves the quality of learning environment which arouse the interest of students in classroom activities and moderately increase their academic achievement in public secondary schools. The infrastructural facility makes students relax and concentrate on their studies to enhance their academic achievement in public secondary schools.

Conclusion and Recommendation

Based on the findings, it was concluded that teachers' quality and work environment have positive and significant relationship with academic achievement among secondary

school students in Delta State, Nigeria. Teachers who acquire more educational qualification and experience as well as working in an environment with sufficient infrastructural facilities will make students comfortable to learn and increase the academic achievement of students in public secondary schools in Delta State, Nigeria.

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

1. Delta State government through the State Ministry of Education should provide study grant and leave with pay for teachers to enable them enroll into educational institutions to upgrade their qualification and knowledge that will improve the academic achievement of students.
2. The State Post Primary Education Board should lay more emphasis on higher job experience as basis for promotion and pay rise to encourage the retention of teachers that lead to accumulation of work experience and increase in academic achievement of students.
3. Delta State government should expand the existing Infrastructural facilities in public schools commensurate with the number of students for better academic achievement of students.

REFERENCES

Adamu, M.A., &Mai'anguwa, M.A. (2020). Teacher's qualification as determinant of students' academic achievement in basic electricity in science and technical colleges in Bauchi and Gombe States. *Vocational and Technical Education Journal*, *2*(2), 223-230.

Adebule, S.O., & Adeusi, A.O. (2017). School size and facilities utilization as correlates of secondary school students' academic performance in Ekiti State, Nigeria. *European Journal of Alternative Educational Studies*, *2*(1), 69-82.

Adeyemi, T. O. & Bolarinwa, R. (2013). Principals' Leadership Styles and Students' Academic Performance in Secondary Schools in Ekiti State, Nigeria. Education International Journal of Academic Research in Progressive Education and Development. 2(1), 187- 198.

Agbor, C.N., Onnoghen, U.N., & Etan, M.O. (2023). Teachers' qualification and academic performance of environmental education students in the University of Calabar. *A Journal of Contemporary Research, 20*(2), 2-12.

Ayeni, A. J. (2017). Teachers' Classroom management and Quality assurance of students' Learning outcome in secondary schools in Ondo State, Nigeria. Journal of Social and Administrative Sciences. 4(2), 160-180.

Berkovich, I. & Benoliel, P. (2018). Marketing teacher quality: Critical discourse analysis of OECD documents on effective teaching and TALIS. Critical Studies in Education, 1-6

Duruji, M. M., Azuh, D. & Oviasogie, F. (2014). Learning environment and academic performance of secondary school students on external examination: A study of selected schools in Ota, Nigeria. Proceedings of EDULEARN 14 Conferences, Barcelonia, Spain, 2014 7th – 9th July, P. 5042 – 5033. Retrieved on 17th July 2022 from: https://www.semanticsscholar.org/paper/20ec786f31b430dofee79dfc274949fb483b

Ewetan, T.O., & Ewetan, O.O. (2015).Teachers' teaching experience and academic performance in Mathematics and English Language in public secondary schools in Ogun State, Nigeria. *International Journal of Humanities Social Sciences and Education*, *2*(2), 123-134.

Federal Republic of Nigeria (2013). National Policy on Education, 6th Edition.

Gilavand, A. & Jamshidnezhad, A. (2016). The effect of noise in educational institutions of learning and academic achievement of elementary students in Ahvaz, Southwest of Iran. *International Journal of Pediatrics*, 4m 1453 – 1463

Katherine, B. (2016) student achievement factors. South Dakota State University. Retrieved from https://www.researchgate.net?3089..... On 17th August, 2022

Maulana, R., Helms-Lorenz, M., & van de Grift, W. (2015). A questionnaire measuring pre- service teaching behavior. A Rasch modeling approach. School of Effectiveness and School of Improvement, 26, 169 – 194

Nworgu, B. C. (2015). *Education research: Basic issues and methodology* (3rded.)

Nwonyuku, K. (2018). The Role of Guidance and Counselling in Performance of Post-Primary Education in Nigeria: Regulatory and Theoretical Perspectives, 12(1) 123-125

Ogunode, N. J. & Agwor, N. (2021). Perception of secondary school teacher on the causes of inadequate infrastructural facilities in Gwagwalada Area Council of F.C.T, Abuja, Nigeria; *Electronic Research Journals*. Retrieved from

http://www.researchgate.net?3500 on 8/10/2022

Okwelle, P. C. (2016). Instructional strategies for technology education teacher. Unpublished Monograph. Faculty of Technical and Science Education, RSU, Port Harcourt.

Olugbenga, M. (2019). Impact of School Facilities on the Academic Performance of Secondary School Students in Kaduna State, Nigeria; *International Journal of Social Science and Humanities Research*; 7 (3): 497-507

Steinmayr, R., Meibner, A., & Weidinger, L. W. (2014). Academic achievement – education. Doi:10.1093/060/9780199756810-0108. Retrieved from https://www.researchgate.net>3518 on 22/10/2022

Stronge, J. H. (2018). Teacher effectiveness performance evaluation system handbook. Retrieved from www.motsd,org on 23/9/2022

Tera, K. & Podolsky, A. (2016). Does teaching experience increase teacher's effectiveness? A review of the research (Palo Alto: Learning, policy institute). Retrieved from Learningpolicyinsitute.org/products.does-teaching-expoerienece-increase-teachereffectiveness-review-research on 28th July, 2022.

Tope, O. (2012). Influence of school environment on the academic performance of secondary school students in Lagos State. *Journal of Education Science, Humanities and Management, 5*(3), 25 – 30

Wallace, H. D., Preston, L. & Harvie, K. M. (2016). Assessing Curriculum Planning for Humanities Inquiry: The Challenges and Opportunities of Poster presentation. Australian Journal of Teacher Education, Vol. 41, 12(5)