

ENVIRONMENTAL CHALLENGES AND ACADEMIC PERFORMANCE OF SENIOR SECONDARY STUDENTS IN BAYELSA STATE

Efebo BATRAM

Department of Educational Management, Faculty of Arts and Education, University of Africa Toru-Orua, Bayelsa State.

ebatram@yahoo.com

ABSTRACT: The study aims to examine environmental challenges and academic performance of public senior secondary schools' students in Bayelsa State. The research design is specifically descriptive design. The sample size of the study is 320 proportionally selected respondents of teachers from 16 senior secondary school schools spread across the three senatorial districts in Bayelsa State. (East Senatorial, West Senatorial and Central Senatorial district) participated in the study. A 45 item three expert validated self-structured 4-point rating scale instrument titled "Environmental Challenges and Academic Performance of Students" questioners (ECAPS) with a reliability coefficient of 0.861 (using Cronbach Alpha (ra) method to ascertain the data analyzed and using mean and standard deviation to respond to the five research questions (with a criterion mean cut off of 2.5), while t-test was used to test the hypothesis at 0.05 level of significance. The study shows that: teachers did not differ on the perception of influence of classroom environment with ($t(285, .025)=1.872$, $p=0.172$), location of school ($t(285, .025)=.198$, $p=0.657$), psycho-socio environment ($t(285, .025)=.627$, $p=0.429$), adequate infrastructural facilities ($t(285, .025)=.376$, $p=0.540$), and strategies ($t(285, .025)=.176$, $p=0.675$) on the academic performance of public senior secondary schools in the area of study. The study recommended as follows school management should ensure that classroom premises is properly illuminated, ventilated, and orderly to enhanced teaching and learning quality and academic performance in senior secondary school. Proper school pre-construction evaluation should be conducted to ensure schools are built in a well-planned, and peaceful environment that will help teachers and student in a proper ways and mood to enhance teaching and learning that will lead to high positive learning among students.

Keywords: Environmental Challenges, Academic Performance, Students

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INTRODUCTION

Education is the livewire of any nation; it is regarded as the most valuable development strategically drives on planet for the development of humanity and sustainable environment. It is the begging for technical growth, literacy, skills acquisition and the ability to organize material and human resources towards achieving a common objective or goal. In any developing nation or community, education is a vital tool for development. Education helps in developing peoples' abilities and capabilities. The abilities encompass emotional abilities, physical abilities, intellectual abilities, and social ability. It also helps in developing the individual full potential so that he/she can be effective to himself and the society in general.

Education according to the Oxford English Dictionary (2013), is “organized training and instruction aimed to convey knowledge and develop abilities.” Education is the conscious or purposive transmission of societal cultural values, expand knowledge, values, and other positive abilities from one generation to the next usual through formal school settings. In the same vein, Uriah (2016), stated that education is just the various encounters that people have throughout their lives that contribute to nurture personal growth. While Haralambos (2013) saw education as essentially a collection of life events that aid in the development of human growth, intellectual and emotional development, and the formation of views and moral ideals. Elekwa (2013) asserted that education principally as a form of socialization in its broadest meaning. It entails the deliberate or unintended acquisition of different learning skills, which are very vital for the all-round development of the individual.

The Nigeria educational system is based on two main factors as a result of deregulation, they are namely: private education and public education. Basically, this study anchored on senior public secondary schools. Public school are generally open for every individual; public schools are the backbone and nucleus of any given society because education is the instrument for social change and also for national development. Udoh and Faghamije (2005) opined that public education is concerned with the learning of adequate physical and mental skills, abilities and competencies as well as the acquisition of relevant and balanced knowledge of fact about local global phenomena as equipment for the individual to live in his society or community.

CONCEPTUAL CLARIFICATION

Learning Environment

A learning environment encompasses the physical, social, and instructional conditions in which learning takes place. It includes the classroom setup, the teacher's methods, student interactions, and the overall atmosphere that influences engagement and success. A positive learning environment fosters engagement, motivation, and a willingness to learn, while a negative one can hinder these aspects. The learning environment of the students' needs to be well conducive and student friendly with modern facilities and equipment with adequate qualitative and well-trained teachers that are motivated in other to attain educational objectives and goals. This status, call for efficient and effective school plant management which direct and control the development of school activities and programs that are invoke for a good teaching and learning environment. Hence, Ajang (2016) opined that a school plant is a set of material things that enhance better academic work or study in education and learning meaningfully and interesting to the learners or students in the school environment.

Additionally, Asiegbu (2014) argued that school plant environment constitutes the space interpretation of the curriculum which includes the building, laboratories, school site, chalkboards, safety equipment, cleaning materials, paths, roads, parking lots, paths, playgrounds, trees, flowers, and other objects that are used for the execution or implementing educational programs of the school. According to Bright (2020), the school is like a mirror of the society in which it operates and the physical environment of the school reflects it true image. That is to say whatever decision taken by the school reflects back to the society because the school is a mini society, where most of the societal activities take place.

In supporting this view, Ajang (2016) argued that a well-maintained and planned school compound is a major condition used to achieve the standard of a school by parents. It is generally

known that parent tend to access school building and a well-maintained school environment as a major factor to quality teaching in a particular school environment. Daminabo (2016) contributed a similar linkup between examination performance and the state of teaching and learning in schools. He disputed that due the financial implications, student from a low-income background perform poorly in their examinations because they mostly leave in areas where social amenities are far from them, most especially the environment is always not conducive, these affect their learning.

Studies has also shown that, schools that are positioned in a calm and serene environment have standard instructional materials, due to that effect they are likely to produce high quality man power than schools with substandard or inferior physical instructional resources. Daminabo (2016) argued that schools that are lacking classrooms will be forced to accommodate many students than required approved numbers by the government, putting a strain on human and material resources available for smooth teaching and learning in the school system in terms of teacher effectiveness, climates, classroom. It is very important to keep in mind that, the lack of basic facilities for example, adequately finished classroom, laboratory with modern designs, that will be suitable for teaching and learning process. This method is better, because a well-planed school will support students to achieve their educational goals. Okaoh (2004) has contributed that a conducive school environment matters a lot in the acquisition of academic performance of students. He further added that a school with a poor delapidated buildings with no seats for the people, no table for teachers, flooded location and unkept premises cannot produce high educated students.

Environmental challenges and academic performance

Bayelsa State in Nigeria's Niger Delta region faces severe environmental pressures including flooding, coastal erosion, air pollution, and adverse climatic conditions that adversely affect academic performance among senior secondary school students. These challenges manifest at both community and school levels, disrupting attendance, compromising health, undermining learning environments, and imposing socioeconomic strain.

Flooding stands out as a particularly disruptive force. Students in Bayelsa have endured repeated flood emergencies that displace families, damage school infrastructure, and force extended closures. Research by Elenwo and Bamson (2023) shows a high positive correlation between flooding and academic performance, signaling that more intense flooding corresponds with significantly poorer academic outcomes (Elenwo & Bamson, 2023). Qualitative studies also highlight the psychological stress inflicted by floods effects that extend beyond physical displacement to undermine students' mental well-being and learning continuity (Mfon, 2024; Okodoko & Owobete, 2025).

Closely linked to flooding are rising temperatures in the region. Elenwo and Bamson (2023) found a strong positive correlation between high ambient heat and decreased student performance. Indoor heat stress in poorly ventilated or overcrowded classrooms often reduces concentration and engagement, eroding exam performance and day-to-day learning. Rainfall, while still showing a statistically significant relationship with performance, was less strongly correlated compared to flooding and heat, which suggests that heavy rainfall impacts performance via indirect pathways, such as dampened classrooms or illness, rather than overt disruptions (Elenwo & Bamson, 2023).

At the school environment level, Giami and Alete-Omoni (2023) surveyed public senior secondary schools in Yenagoa and found that school physical facilities and the broader learning environment significantly influence student achievement. Teachers rated classroom adequacy, seating, laboratories, libraries, and ventilation as influencing performance “to a high extent” (Giami & Alete-Omoni, 2023). Supporting this, Kolubowei (2019) studied secondary schools in Yenagoa LGA and identified overcrowded classrooms, insufficient teaching staff, and inadequate curricular materials as major constraints on learning outcomes (Kolubowei, 2019). Similarly, Okodoko and Owobete (2025) demonstrated that school location a proxy for environmental exposure and access to infrastructure is significantly associated with academic performance, though the correlation is moderate (Okodoko & Owobete, 2025).

A focused study in Amassoma further reveals that environmental factors such as noise pollution, weather instability, motivational deficits, and limited instructional materials diminish Senior Secondary II students’ academic performance. The absence of robust parental support and school-based incentives exacerbated these effects (Wankasi et al., 2022).

Collectively, these findings paint a multidimensional picture: flooding, extreme heat, school environmental deficiencies, and socioeconomic constraints converge to impair attendance, learning conditions, teacher effectiveness, and student focus. These intertwined effects contribute to noticeably lower academic outcomes within senior secondary schools across Bayelsa. Environmental stressors in Bayelsa State, which includes flooding, coastal erosion, and heat coupled with inadequate school infrastructure and socioeconomic disadvantage, constitute a potent combination that undermines the academic performance of senior secondary students. A holistic policy response that addresses both physical and psychological environments, bolstered by infrastructure improvements and disaster-responsive planning, is essential to safeguard and improve educational outcomes.

METHODS

The study was carried out in Bayelsa State. Bayelsa State is one of the six states that make up Nigeria, situated in the South-South geographical zone. It has inter-state boundaries with River’s state to the west and northwest and Delta state to the east and southeast. The Gulf Guinea lies to its south. The State capital of Bayelsa is Yenagoa. The State was originally part of the Eastern Region in the three regions structured of 1954. In 1967, with the creation of the twelve Federal state by General Yakubu Gowon’s military government, it became part and parcel of Rivers State. Thereafter the military government of General Sani Abacha on the 1st of October, 1996 carved out a portion of the then River’s state to create Bayelsa State. The name Bayelsa, is an acronyms of three former Local Government Areas namely: Brass Local Government, Yenagoa and Sagbame. Bayelsa State covers an area of 9,415.8 square kilometers and lies at latitude 4.45’ North and longitude 6.05’ East. It has an estimated population of 1,704,515. (2006 census report).

The population for the study entailed all the teachers in the 285 public senior secondary schools cut across the three senatorial district namely: Bayelsa East, Bayelsa West and Bayelsa Central senatorial district. The study sourced both secondary and primary information. The secondary data was obtained from journals, textbooks, articles, newspapers, magazines, internet material, lecture notes, among other sources. A sample size of 320 respondents was hypercritically drawn to be efficient for the attainment of the objectives of the research work.

The multistage sampling method was used. Firstly, the purposive sampling technique was used to select 3 senatorial districts in Bayelsa, namely: East, Central, and West senatorial districts.

In the second phase, percentage sampling was used to ascertain 3 out of 6 (i.e. 50%) senatorial district, and then, random sampling specifically (Blindfold) was used to pick or select of 3 consecutive numbers (out of 6 numbers) standing for the 3 senatorial districts namely: East, Central and West senatorial districts. In the fourth phase, proportionate stratified sampling method was used in the selection of 16 senior secondary schools (6 from Bayelsa East, 5 from Bayelsa Central and 5 from Bayelsa West senatorial districts) in the fifth stage which is the final stage, a random sampling technique was adopted in the selection of 20 teachers (irrespective of their discipline) in each of the senior secondary schools cut across the three senatorial districts in Bayelsa State. The study used a total sample of 320 teachers (respondents).

The instrument used for the collection of data was 45 item self-structured instrument titled “Environmental Challenges and Academic Performance of Students” (ECAPS). The ECAPS instrument was arranged after a four-point rating scale of Very High Extent (VHE, 4 Points), High Extent (HE, 3 Points), Low Extent (LE, 2 Points), and Very Low Extent (VLE, 1 Point). Additionally, the EIFBCS method comprises of three different sections namely: Section A spelled out the demographics of the participants, Section B consist of 35 item variables of environmental impediment (i.e 7 each for the 5 scope of environmental setbacks via location of school, classroom environment, infrastructural facilities, phyco-social environment, and methods used by the teachers to limit environmental challenges) meanwhile section C entailed 10 item variable of student academic performance.

The Cronbach Alpha approach was used to ascertain the ECAPS instrument’s reliability. In order to achieve this, 50 copies of ECAPS questioners were delivered to 50 teachers from senior secondary in Nembe Local Government Area “five each” (which was not used as part of the study). The respondents were given 50 copies of ECAPS questioners, which were then retrieved, coded, and analyzed by using the Cronbach Alpha (ra) technique to ascertain a reliability coefficient of 0.861. due to the obtained reliability coefficient, the ECAPS instrument was used to carry out the study. The data was tabulated, scored, coded, and evaluated or analyzed using standard deviation and mean to respond to research questions at a criterion mean point of 2.5, and t-test was used for the hypotheses at a level of 0.05 level of significance. The package used for the study was the Statistical package for Social Science (SPSS) to ascertain the statistical calculations 22.0 was used.

RESULTS

Research Question 1: Does classroom Environment improve the academic performance of Public senior secondary school students?

Table 1: Mean and Standard Deviation is used to calculate the extent in which Classroom Environment improve the academic performance of public secondary school students

S/N	Items	Mean	SD	Decision
1	Properly illuminated classroom enhances learning	3.43	0.79	High Extent
2	Dilapidated building or facilities in the class affects student learning	3.49	0.60	High Extent
3	Overcrowding in the class increases noise which affects student learning	3.02	0.96	High Extent
4	Availability of instructional aids improve student learning	2.78	1.07	High Extent
5	Overcrowding in class make it difficult for student to learn effectively	3.32	0.71	High Extent
6	Poorly ventilated school classroom affects students learning	3.16	0.82	High Extent
7	A secured and safe classroom environment increases student learning interest	3.04	0.97	High Extent
Grand Mean		3.18	0.85	High Extent

From the table one it shows that the mean rating and standard deviation on the extent in which Classroom Environment improve the academic performance of public secondary school students. It also revealed that the extent to which classroom environment improves the academic performance of senior public secondary school students in Bayelsa State includes: dilapidated building or facilities in the class make students learning ineffective or difficult ($X=3.49$) properly illuminated classroom enhance learning ($X=3.43$) Overcrowding in the class increases noise which affects student learning ($X=3.32$) Poorly ventilated school classroom affects students learning in the class ($X=3.02$) Availability of instructional aids improve student learning quality ($X=2.75$) also, the grand mean score of 3.18 indicates, therefore the classroom environment to an extent improves the academic performance of public senior secondary school students in Bayelsa State.

Research Question 2: Does the location of school improve the academic performance of senior secondary school students?

Table 2: Mean and Standard Deviation on the location of school improves the academic performance of senior secondary school students.

S/N	Items	Mean	SD	Decision
8	Appropriate placement of school enhances teaching and learning	3.43	0.79	High Extent
9	Building schools in a highly hot environments can affect students' emotion, health and their mood	3.06	0.85	High Extent
10	Building schools in a flood prone area or polluted environment affects students and teachers learning	2.96	0.99	High Extent
11	Location of schools in areas free from violence improves students and teachers learning	3.17	0.81	High Extent
12	Locating of schools near market environment affect students learning abilities	2.98	0.91	High Extent
13	Building of school far from community increases reading and learning of students	3.24	0.81	High Extent
14	Sitting schools in a quiet, serene, and peaceful environment improve students learning abilities	2.98	0.92	High Extent
Grand Mean		3.12	0.86	High Extent

Table 2 revealed the mean rating and standard deviation on the extent to which location of school improves the academic performance of senior secondary school students this includes: appropriate placement of school enhances teaching and learning ($X=3.43$) in item 2 which is building schools in a highly hot environments can affect students' emotion, health and their mood ($X=3.06$) While Building schools in a flood prone area or polluted environment affects students and teachers learning ($X=2.96$) Location of schools in areas free from violence improves students and teachers learning ($X=3.17$) Locating of schools near market environment affect students learning abilities ($X=2.98$) Building of school far from community increases reading and learning of students ($x=3.24$). Finally, sitting schools in a quiet, serene, and peaceful environment improve students learning abilities is $X=2.98$). the grand mean score of 3.12 indicates, therefore the location of the school improves the academic performance of students in public secondary schools in Bayelsa State.

Research Question 3: Does Psycho-social Environment improve the Academic Performance of Public secondary school students?

Table 3 Mean and Standard Deviation on Psycho-social Environment improve the Academic Performance of Public secondary school students

S/N	Item	Mean	SD	Decision
15	Positive social interaction among students increases their learning abilities	3.41	0.84	High Extent
16	Students' confidence can motivate them in learning process	3.17	0.82	High Extent
17	Support teachers physically increase students' level of academics in school	3.19	0.96	High Extent
18	Improves student's exhibition of positive characters helps student to learn	3.06	0.94	High Extent
19	Build students emotional capabilities helps students focused more on learning	2.96	1.01	High Extent
20	Teachers' possession of positive character helps students learning abilities	3.19	0.85	High Extent
21	Teachers' exhibition of intelligence executes students learning	3.14	0.88	High Extent
Grand Mean		3.16	0.90	High Extent

Table 3 revealed the mean rating and standard deviation on the extent to which Psycho-social Environment improve the Academic Performance of Public secondary school students. The result on positive social interaction among students increases their learning abilities stands at (X=3.41) while Students' confidence can motivate them in learning process is (X=3.17) meanwhile Support teachers physically increase students' level of academics in school is (X=3.19) other areas like improves student's exhibition of positive characters helps student to learn is (X=3.06) also, build students emotional capabilities helps students focused more on learning is (X=2.96) while, teachers' possession of positive character helps students learning abilities is (X=3.19) finally, teachers' exhibition of intelligence executes students learning is (X=3.14). Furthermore, the grand mean score of 3.16 indicates, therefore, the psycho-social environment to an extent improved the academic performance of students in public secondary schools.

Research Question 4: Does adequate infrastructural facilities improve teaching and learning process in public senior secondary school students

Table 4: Mean and Standard Deviation on the extent to which infrastructural facilities improve the academic performance of students in senior secondary school

S/N	Item	Mean	SD	Decision
22	Well-furnished and equipped school libraries help students to study header in school	3.36	0.81	High Extent
23	Accessibility of school plants improve teaching and learning	3.25	0.77	High Extent
24	Unmaintained school facilities affect teaching and learning	2.99	0.83	High Extent
25	A well equipped and conducive environment provide students with maximum comfort to effectively learn	3.07	0.93	High Extent
26	Availability of game and recreational centers help students to be mentally stable for learning	2.86	0.92	High Extent
27	Well-furnished laborites enhance students' practical knowledge	3.14	0.83	High Extent
28	Accessibility of functional toilets facilities helps to improve teachers and students' health	3.08	0.90	High Extent
Grand Mean		3.11	0.86	High Extent

Table 4 show the mean rating and standard deviation on the extent to which infrastructural facilities improve the academic performance of students in senior secondary school. It further reveled the extent to which infrastructural facilities improve the academic performance of students in senior secondary school basically: Well-furnished and equipped school libraries help students to study header in school is (X=3.36) then accessibility of school plants improve

teaching and learning stood at (X=3.25) Unmaintained school facilities affect teaching and learning is (X=2.99) while, well-equipped and conducive environment provide students with maximum comfort to effectively learn is (X=3.07) availability of game and recreational centers help students to be mentally stable for learning is (x=2.86) more so, well-furnished laborites enhance students' practical knowledge is (X=3.14) lastly, accessibility of functional toilets facilities helps to improve teachers and students' health is (X=3.08). Additionally, the grand mean score of 3.11 shows, therefore, infrastructural facilities relatively improve the academic performance of students in senior secondary schools.

Research Question 5: Does teachers' different positive methods to curb environmental challenges influence students' academic performance in public secondary schools.

Table 5: Mean and Standard Deviation on teachers' different positive methods to curb environmental challenges influence students' academic performance in public secondary schools.

S/N	Items	Mean	SD	Decision
29	Proper methods of using instructional materials influence or improve students' academic performance	3.32	0.94	High Extent
30	Engaging students in extra-curricular activities increase their level of learning	3.19	0.76	High Extent
31	Cultivating and building a close relationship can promote students learning	3.19	0.76	High Extent
32	Teachers building relations with each students motivate students learning	3.16	0.88	High Extent
34	Engaging students in activities that excite them helps to motivate their learning	3.17	0.84	High Extent
35	Simplifying lesson notes helps to meet the needs of each student in learning	3.18	0.86	High Extent
36	Givin students group assignment can improve their thinking faculty	3.07	0.98	High Extent
Grand Mean		3.18	0.89	High Extent

Table 5 shows the mean and standard deviation on the level on different methods to curb environmental challenges influence students' academic performance in public secondary schools in the study. It further revealed that the extent on different methods to curb environmental challenges influence students' academic performance in public secondary schools include: Proper methods of using instructional materials influence or improve students' academic performance is (X=3.32) in item 1, Engaging students in extra-curricular activities increase their level of learning is (X=3.19) in item 2, Cultivating and building a close relationship can promote students learning is (X=3.19) in item 3, Teachers building relations with each students motivate students learning is (X=3.16) in item 4, Engaging students in activities that excite them helps to motivate their learning is (X=3.17) in item 5, Simplifying lesson notes helps to meet the needs of each student in learning is (X=3.18) in item 6, Givin students group assignment can improve their thinking faculty is (X=3.07). also, the grand mean score indicates 3.18. consequently, different positve methods to curb environmental challenges to an extent affected the academic performance in public secondary schools' students.

Test Of Hypotheses

Hypotheses 1: There is no considerable difference in the discernment of Teachers on the impact of Classroom Environment improving the academic performance of students in senior public secondary schools.

Table 6: Summary of T-test Analysis on the disparity in sagaciousness of Teachers impacts of Classroom Environment on the Academic Performance of Senior Public Secondary Schools

Teacher	N	Mean	SD	t	Df	p-Value	Decision
Female	133	22.0602	2.53090	1.872	285	0.172	Not
Male	154	22.3766	2.05505				Significant

Table 6 revealed that there is no major difference in the in the discernment of Teachers on the impact of Classroom Environment improving the academic performance of students in senior public secondary schools. ($t=285, .025, =1.872$). The null hypothesis was engaged. The mean distinction was moderately close but in favor of the male teachers. The concern is that both female and male teachers there is no change in the perception on how the classroom environment influences the academic performance of the students,

Hypotheses 2: There is no considerable difference in the location of school improving the academic performance of senior secondary school students.

Table 7: Summary of T-test Analysis on the disparity in the location of school improving the academic performance of senior secondary school students

Teacher	N	Mean	SD	t	Df	p-Value	Decision
Female	133	21.5414	2.10523	.198	285	0.657	Not
Male	154	22.0390	2.04806				Significant

Table 7 revealed that there is no major difference in the location of schools in improving the academic performance of senior secondary school students. ($t=285, .025, =.198, p=0.657$). The null hypothesis was engaged. The mean distinction was moderately close but in favor of the female teachers. The concern is that both female and male teachers there is no change in the perception on how the proper location of the school influences the academic performance of the students.

Hypotheses 3: There is no considerable difference on Psycho-social Environment improving the Academic Performance of Public secondary school students

Table 8: Summary of T-test Analysis on the disparity in Psycho-social Environment improving the Academic Performance of Public secondary school students in Bayelsa State

Teacher	N	Mean	SD	t	Df	p-Value	Decision
Female	133	22.2256	2.05462	.627	285	0.429	Not
Male	154	22.0130	2.17829				Significant

Table 8 revealed that, there is no major difference in Psycho-social Environment improving the Academic Performance of Public secondary school students in Bayelsa State ($t=285, .025, =.627, p=0.429$). The null hypothesis was engaged. The mean distinction was moderately close but in favor of the female teachers. The concern is that both female and male teachers there is no change in the perception on Psycho-social Environment improving the Academic Performance of Public secondary school students in Bayelsa State.

Hypotheses 4: There is no much difference on infrastructural facilities improving the academic performance of students in senior secondary schools in Bayelsa State

Table 9: Summary of T-test Analysis on the disparity on infrastructural facilities improving the academic performance of students in senior secondary schools in Bayelsa State

Teacher	N	Mean	SD	t	Df	p-Value	Decision
Female	133	21.7669	1.80020	.376	285	0.540	Not
Male	154	21.7532	1.83043				Significant

Table 9 revealed that, there is no major difference on infrastructural facilities improving the academic performance of students in senior secondary schools in Bayelsa State ($t=285$, $.025$, $=.376$, $p=0.540$). The null hypothesis was engaged. The mean distinction was moderately close but in favor of the female teachers. The concern is that both female and male teachers there is no change in the perception on infrastructural facilities improving the academic performance of students in senior secondary schools in Bayelsa State

Hypotheses 5: There is no much difference on teachers' different methods to curb environmental challenges influence students' academic performance in public secondary schools.

Table 10: Summary of T-test Analysis was used on teachers' different methods to curb environmental challenges influence students' academic performance in public secondary schools.

Teacher	N	Mean	SD	t	Df	p-Value	Decision
Female	133	22.4737	2.43267	.176	285	0.675	Not
Male	154	22.1234	2.52135				Significant

Table 5.10 revealed that, there is no major difference on teachers' different methods to curb environmental challenges influence students' academic performance in public secondary schools. ($t=285$, $.025$, $=.176$, $p=0.675$). The null hypothesis was engaged. The mean distinction was moderately close but in favor of the female teachers. The concern is that both female and male teachers there is no change in the perception on teachers' different methods to curb environmental challenges influence students' academic performance in public secondary schools in Bayelsa State.

DISCUSSION OF FINDINGS

Based on the findings, the grand mean score in Table 1 was 3.18, indicates that the extent to which classroom environment enhance the academic performance of senior secondary schools students in Bayelsa State includes: bad facilities (like seat, tables and fan) in the school make students learning difficult, Proper lighting in the classrooms improve and facilitate learning, overcrowding in the class makes teachers not to be focus and interested with subject areas, poorly ventilated classroom hinder students to stay in class during learning period, a safe environment stabilize students mind to learn, therefore increase students interest in school, overcrowding constitute noise in the class, which affect students learning, while availability of instructional materials or aids helps in the smooth delivering of teaching, which improve their

learning. Kpee (2013) stated that are happy and committed to deliver their duties in school environment where all the physical learning material or facilities.

Table 2 shows a grand mean score of 3.12, showing that the level to which location of school influence students' academic performance in school includes: sighting of schools in a safe environment, improve reading and learning. This finding is with line with the contribution of Chukwuemeka (2013) that the suitable or proper size, siting, shape, design, or location of school building in safe, serene or quiet, and clean environment makes teaching and learning comfortable, conducive and has a direct impact on the performance of its users (i.e teachers or students)

The grand mean score in table 3 shows a score of 3.16 indicating that the level to which psychosocial environment enhances the academic performance of public senior secondary school pupils in Bayelsa State includes: encouraging social interaction among teachers and students improve the level of academic support available to students. The finding is with inline with Adamu (2015) that teachers grasping and deeper understanding of the complexity of issues among students would enable them to develop measures at fostering positive social interaction, increasing student support, an exhibition of the level of intelligence, professionally execution of task, and possession of positive attitudes and character that would be emulated, thereby improving students' confidence and motivation in the entire learning processes and schooling.

Tables 4 shows a grand mean score of 3.11, indicating that sufficient infrastructural conditions in the study improve academic performance of senior public secondary school pupils in the following ways: availability of school plants like (tables, chairs and desks, etc.) improve teaching and learning process, well-furnished laboratories improve students practical and teachers' knowledge. The findings is with line with Okudos and Omotuyola (2014) said that play or recreation eases the class or academic pressures of students thereby playing a very important cognitive development that occurs in stages towards the enormous benefit of students.

Tables 5 revealed a grand mean score of 3.18, indicating that teachers at the public senior secondary schools in the study adopted the following methods to curb environmental challenges that influence students' academic performance in public secondary schools. Keeping the environment clean and quiet will help the student to assimilate whenever the teacher is teaching. Consequently, adequate or well-equipped libraries with chairs, tables, desks and other essential materials of facilities like conveniences improve teaching and learning, practical knowledge, and enthusiasm to effectively learn and accomplished school objectives (Mathew, 2013).

CONCLUSION

Education is the livewire of any society or nation, it is regarded as the most valuable development strategic drives on planet for the development of humanity and for sustainable environment. It is the begging for technical growth, literacy, skills acquisition and the ability to organize material and human resources towards achieving a common objective or goal. In any developing nation or community, education is a vital tool for development. Environmental challenges is one of the major aspects to be focused, most especially the location of the school is a vital consideration that will lead to the siting of well safe , serene, secured, peaceful and adequate classroom environment (with, proper lighting orderliness, tables, ventilation seats, etc.) that will improve teachers positive interest and attitude to propel positive social interaction and socialization that enhance learning quality, motivation, increase students confidence, character, and academic performance in the teaching and learning process. Finally, policymakers and

educators can assist or help to mitigate the negative influences and effects of environmental challenges and develop or promote better academic learning outcomes for students.

Recommendations

Based on the study carried out, the following recommendations were made:

- Bayelsa State Government should ensure that more public senior secondary schools are constructed in a well-planned environment.
- The school management should fix all the bad lights in the schools this will help to improve teaching and learning process in the government schools.
- The school management should enforce teachers to make use of instructional materials while teaching, this will stimulate and capture students' attention.
- The Ministry of Education in line with Bayelsa State Universal Basic Education Board (SUBEB) to provide well-equipped libraries, recreational sport facilities and laboratories.

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