

Secondary School Students' Perception of Environmental Variables Influencing Academic Performance in Edo State, Nigeria

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Abstract: *The study investigated the environmental variables influencing academic performance of Secondary School Students. The study specifically examined the influence of three environmental variables namely, learning environment, teachers' method of teaching and family condition on students' academic performance. A total of 1500 students drawn through multistage proportionate sampling technique constituted the sample of the study. The instrument titled "Environmental Factors in Students Academic Performance Questionnaire" (EFSAPQ) was used to obtain responses from the participants. Data were analyzed with percentages. The study revealed that learning environments, teacher's method of teaching and parental socio-economic status mediated on students' academic performance. The study recommended among others the provision of manageable class size, and congenial learning environment devoid of external interferences; parents should provide incentives and, show mutual concern with teachers on students learning to enhance their academic performance; and government should equitably distribute scarce resources among families based on the principles of social justice to enhance the families' living conditions.*

Introduction

In Nigeria, secondary education is the education children receive after primary education and before the tertiary stage. Consequently, the broad goals of secondary education are geared to prepare the individual for useful living within the society and to progress to higher education (Federal Government of Nigeria, 2004). The school at this level is established so that students can learn in order to be able to transmit knowledge from one generation to another for the continuity and well-being of the society. Learning as a hypothetical construct can only be inferred from observable behavior. Psychologists usually define learning as a relatively permanent change in behavior due to past experience or the process by which relatively permanent changes occur in behavioral potentials as a result of experience (Gross, 2010)

In fact, secondary school education is an investment and an instrument that can be used to achieve a more rapid economic, social, political, technological, scientific and cultural development in the country. The role of secondary education is to lay a solid foundation for better academic performance of students in their pursuit of university education and in other higher institutions with the aim of producing competent manpower for the growth and development of the nation. Recent trends in this tier of education in Nigeria show poor academic results from our children. The preponderance of mass failure in the final examinations conducted by various examination bodies (WAEC, NECO NABTEB) has led to the hue and cry by all and sundry over students' poor academic performance. It is clear that this tier of education is now seriously threatened by total near collapse as evident by students' abysmal performance in 2011 examination results in Nigeria.

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Dissenting groups have passed the blame of students' poor performance on teachers, parents and government policy somersault. According to Aremu and Sokan (2003), and Aremu and Oluwole (2001), secondary school students' poor performance may be hinged on students because of their low retention, parental factors, association with wrong peers and motivation. Previous research evidence showed that poor academic performance at the secondary school level of education is a product of teacher, school and the home environment. According to Morakinyo (2003), the falling level of academic performance of secondary school students is attributable to teachers' non-use of verbal reinforcement. Also the home environment or family background of learners affects their academic performance (Ajila & Olutola, 2007)

The sharp decline in the academic performance at various levels of our educational system in Nigeria is largely attributed to the poor conditions in our educational institutions. These include lack of modern instructional technology, poor classroom conditions and lack of adequate training programmes for teachers. Similarly, classroom learning environments and school factors exert some dominant influence on learners, since man is a product of his environment. The importance of learning environment to a successful academic achievement cannot be overemphasized. The learning environment includes school location and physical buildings, laboratory equipment, library services and materials, instructional aids and effective classroom management. Intelligence is not the only determinant of academic achievement. Learning environment affects the academic achievement of a student. According to Basque and Dore (1998), learning and teaching environment ought to implement six functions: inform, communicate, collaborate, produce, scaffold and manage. They added that conceptually speaking, the learning environment refers to the whole range of components and activities within which learning happens.

Learning environment that is free from barriers or distraction such as noise, gas/smoke pollution and so on, will promote students' concentration or perceptual focus to learning (Sprinthall, 1987). Similarly, the entire unattractive physical structure of the school building could demotivate learners to achieve academically. This mismatch promotes poor academic performance. Danesty (2004) stated that dilapidating building lacking mental stimulating facilities that are characterized with low or no sitting arrangement, will also affect students' learning.

Class size has also been identified as a determinant of academic performance. Schools with smaller class size perform better academically than schools with larger class size. Kraft (1994) in his study of the ideal class size and its effects on effective teaching and learning concluded that any class size above forty (40) has negative effects on students' achievement. Generally, good teaching is best done in classes with small numbers that allow for individual attention.

Teachers do make a difference to motivate students in learning, working in tandem with parents who are the first teachers to children. Noordin, Azizi, Jamaludin, Shahrin and Zurihanmi (2010) opined that

teachers can make school life miserable or appealing by filling the classroom with excitement and hope. Students will continue in their learning and even search for more knowledge under the leading of enthusiastic teacher (Wlodkowski & Jaynes, 1990). Atkinson (2000) found a positive relationship between teachers' motivation and the students' performance.

The availability and use of teaching and learning materials affect the effectiveness of a teacher's lesson. The use of a variety of media increases the probability that the students would learn more and that young children are capable of understanding abstract ideas if they are provided with sufficient materials and concrete experience with the phenomena that they are to understand. Adu and Olatundun (2007), Adediwura and Tayo (2007), and Star (2002) suggested that effective teaching is a significant predictor for students' academic achievement. In short, poor academic performance of students has been linked to poor teachers' performance in terms of accomplishing learning tasks (Ofoegbu, 2004; Asikhia, 2010).

The home environment or family background of students affects their academic performance (Ajila and Olutola 2007; Nzewuawah, 1995; Ichado, 1998). The home environment sharpens the child's initial view of learning. Parents' beliefs, expectations and attitudes about education have a profound early impact on students' conceptions of the place of education in their life.

Children in poverty often face problems at home and at school that compromises their learning (Ceballo and McLoyd, 2002, Evans and English, 2002). At home, they might have parents who do not set high educational standards for them, who are incapable of reading to them, and who do not have enough money to pay for educational materials and experiences such as books and trips to zoos and museums. They might be malnourished and live in areas where crime and violence are a way of life (Santrock, 2004).

The home environment is as important as what goes on in the school. The home factors include: parental involvement in children's education, how much parents read to young children; how much television children are allowed to watch; and how often students change schools. Phillips (1998) also found that parental education and social economic status have an impact on students' achievement. Students with parents who were both educated tended to achieve at the highest levels. Income and family size were moderately related to achievement (Ferguson, 1991). Thus from the analysis of academic achievement, home environment (including family income) and educational activities, it can be concluded that home environment and educational activities explained the greatest amount of variance (Peng and Wright, 1994; *Kamaruddin, Zainal, Aminuddin and Jusoff, 2009*)

The import of this study, therefore, was specifically to measure the perception of students on the influence of environment variables (learning environment, teachers' method of teaching and family condition) on their academic performance. In concrete terms, this study aimed at investigating the influence of the following: learning environment on students' academic performance; the effect of

teaching method on students' academic performance; and the impact of family conditions on students' academic performance. Thus, this study addressed three research questions: How do secondary school students perceive the quality of learning environment in relation to their academic performance? How do secondary school students perceive teachers' teaching methods in relation to their academic performance? How do secondary school students perceive parents economic status in relation to their academic performance?

Method of Study

Participants: A total of 1500 students drawn through multistage proportionate sampling technique from the sampled secondary schools in Edo State were used as participants for the study. The sample was made up of 763 males with the age mean =14. 7, SD = 1.21 and 737 females with age mean = 13.8, SD = 1.30, drawn from all the secondary schools in the study location.

Measures: The instrument used for the study was entitled "Environment Factors and Students Academic Performance Questionnaire (EFSAPQ)" designed by current researchers to obtain relevant information. The first part of the questionnaire had information on personal data. The other section had 20 items eliciting responses on learning environment, teachers' method of teaching, and family conditions. The items were measured on a four point scale ranging from Strongly Agree, Agree, Disagree and Strongly Disagree format. The instrument was validated by two experts in Educational Psychology in the Department of Educational Foundations and Management, Faculty of Education, Ambrose Alli University, Ekpoma, Nigeria. The aim was to ensure that the items in the instrument were capable of obtaining responses to test the research questions. To test for the reliability of the instrument, a pre-test was conducted on a sample of 30 students in a secondary school that was not a part of the sampled schools. The split-half method used yielded a reliability index of 0. 82.

Procedure: The instrument was administered by the principal author with the aid of assistance from teachers in the sampled secondary schools. Respondents were guaranteed confidentiality and the instrument was filled anonymously with no identification information. Data were analyzed with percentage using SPSS (Statistical Package for Social Sciences)

Results

1. How do secondary school students perceive their learning environment as an influence of their academic performance? To answer this question based on the variables, the respondents' scores were analyzed and the summary is presented in Table1.

Based on the Table I, 140 students representing 9.33% strongly agreed that lack of desk affect their academic performance, and 50 students representing 3.33 agreed that lack of desk affect their learning, while 210 representing 14.00% disagreed and 1100 students representing 73.33% strongly disagreed on the effect of this variable on their academic performance. On class size, 650 students

Table 1: Students' Perception of Influence of Learning Environment on Students Academic Performance

Variables	Strongly Agree	Agree	Disagree	Strongly Disagree
My school does not have desk	140 (9.33%)	50 (3.33%)	210 (14.00%)	1100 (73.33%)
The size of my class is large	650(43.35)	530(35.33%)	170(11.33%)	150(10.00%)
My friends distract me in school	240(16.00%)	440(29.33%)	380(25.33%)	440(29.33%)
The roof in my classroom is bad	220(14.67%)	110 (7.33%)	210(14.00%)	960(64.00%)
My school is close to the road	200(13.33%)	350(23.33%)	400(26.67%)	550(36.67%)
My school environment is noise	330(22.00%)	450(30.00%)	250 (16.67%)	470(31.33%)

representing 43.33% strongly agreed that the size of their class was large and 530 students representing 35.33% agreed that their class is large and could affect their academic performance. But 170 students representing 14.00% and 150 representing 10.00% disagreed and strongly disagreed respectively that the size of their class was large.

On distraction from friends in school, 240 students representing 16.00% strongly agreed on it and 440 students representing 29.33% and 440 students representing 29.33% agreed on the variable, while 380 students representing 25.33% and 440 student representing 29.33% disagreed and strongly disagreed respectively on this variable. On the bad roof in the classroom, 220 student representing 14.00% and 960 students representing 64.00% disagreed and strongly disagreed on it.

On school closeness to the road as influence on students' academic performance, 200 students representing 13.33% strongly agreed and 350 students representing 23.33% strongly agreed and 350 students representing 23.33% agreed, but 400 students representing 26.67% disagreed and 550 students representing 36.67% strongly disagreed. Furthermore, 330 students representing 22.00% strongly agreed that their school environment is noisy, and 450 students representing 30.00% also agreed on the effect of this variable, but 250 students representing 16.67% and 470 students representing 31.33% disagreed and strongly disagreed respectively.

2. .How do secondary school students perceive teachers' teaching methods as influencing students' academic performance? To answer this question based on the variables, respondents' scores were analyzed and the summary is presented in Table2.

Table 2: Students' Perception of Teachers' Method of Teaching as influencing Students' Academic Performance

Variables	Strongly Agree	Agree	Disagree	Strongly Disagree
My teacher does not use teaching aids	230 (15.33%)	210 (14.00%)	230 (15.33%)	830 (55.33%)
The textbooks in our library are out dated	420(28.00)	480(32.00%)	260(17.33%)	340(22.67%)
my teacher do not motivate me to learn	40(2.67%)	100(6.67%)	340(22.67%)	120(68.00%)

Based on the Table 2, 230 students representing 15.33% strongly agreed that their teachers do not use teaching aids and 210 students representing 14.00% agreed on the non- use of teaching aids, but 230 students representing 15.33% and 830 students representing 55.33% disagreed and strongly disagreed respectively

On obsolete textbooks in the school library as influencing students' academic performance, 420 students representing 28.00% strongly agreed on it and 480 students representing 32.00% agreed, while 260 students representing 17.33% and 340 students representing 22.67% disagreed and strongly disagreed respectively. On motivation, 40 students representing 2.67% and 100 students representing 6.67% strongly agreed and agreed respectively on it, while 340 students representing 22.67% disagreed and 120 students representing 68.00% strongly disagreed on this variable as a hindrance to their academic performance.

3. How do secondary school students perceive family conditions as influencing students' academic performance? To answer the question based on the variables, the respondents' scores were analyzed and summary is presented in Table3.

Table3: Students' Perception of Family Conditions influencing Academic Performance.

Variables	Strongly Agree	Agree	Disagree	Strongly Disagree
I do not have writing materials	20(1.33%)	50(3.33%)	210(14.00%)	1220(81.33%)
I do not have text books	220(14.00%)	260(17.33%)	360(24.00%)	660(44.00%)
My school uniform is bad	40(2.67%)	40(2.67%)	320(21.33%)	1100(73.33%)

I do not pay my school fees on time	40(2.67%)	350(23.3%)	30(20.00%)	810(54.00%)
I do not attend extra lesson	380(25.33%)	28(18.67%)	200*13.33)	640(42.67%)
I do trek to school every morning	340(22.67%)	240(16.00%)	180(12.00%)	740(49.33%)
I do not eat to school	100(6.67%)	270(18.00)	210(14.00%)	920(61.33%)
After school I help my parents to hawk	40(2.67%)	40(2.67%)	90(6.00%)	1330(88.67%)
My parents are not educated	340(22.67%)	240(16.00%)	180(12.00%)	740(49.33%)
The harshness of my parent affect my studies	70(4.67%)	110(7.33%)	290(19.33%)	1030(72.00%)
My parents are not living together	100(6.67%)	90(6.00%)	210(9.33%)	1170(78.00%)

Based on the Table 3, 20 students representing 1.33% strongly agreed; and 50 students representing 3.33% agreed that lack of writing materials affected their academic performance, while 210 students representing 14.00% and 1220 students representing 81.33% disagreed and strongly disagreed respectively. The table further revealed that 220 students representing 14.67% strongly agreed on lack of textbooks and 260 students representing 17.33% agreed on this variable, while 360 representing 24.00% and 640 students representing 44.00% disagreed and strongly disagreed respectively.

On bad school uniform, 40 students representing 2.67% strongly agreed and agreed respectively that it could affect their academic performance, while 320 students representing 21.33% and 1100 students representing 73.33% disagreed and strongly disagreed respectively. Also, on delay in payment of school fees, 40 students representing 2.67% and 350 students representing 23.33% strongly agreed and agreed respectively on it, while 30 students representing 20.00% and 810 students representing 54.00% disagreed and strongly disagreed respectively.

Furthermore, 380 students representing 25.33% and 280 students representing 18.67% strongly agreed and agreed respectively on not attendance of extra lesson, but 200 students representing 13.33% and 640 students representing 42.67% disagreed and strongly disagreed. On trekking to school, 340 students representing 22.67% and 240 students representing 16.00% strongly agreed and agreed, while 180 students representing 12.00% and 740 students representing 49.33% disagreed and strongly disagreed respectively. The table further reveals that 100 students representing 6.67% and 270 students representing 18.00% strongly agreed and agreed that they did

not eat to schools but 210 students representing 14.00% and 920 students representing 61.33% disagreed and strongly disagreed respectively.

On helping parents to hawk as influence of academic performance, 40 students representing 2.67% strongly agreed and agreed, while 90 students representing 6.00% and 1330 students representing 88.67% disagreed and strongly disagreed respectively. Again, 340 students representing 22.67% and 240 students representing 16.00% strongly agreed and agreed that their parents were not educated, while 180 students representing 12.00% and 740 students representing 49.33% disagreed and strongly disagreed respectively. Moreover, 70 students representing 4.67% and 110 students representing 7.33% strongly agreed and agreed respectively that parental harshness affected their studies, while 290 students representing 19.00% and 1030 students representing 49.33% disagreed and strongly disagreed respectively. Lastly, 100 students representing 6.67% and 90 students representing 6.00% strongly agreed and agreed respectively that their parents were not living together, while 210 students representing 9.33% and 1170 students representing 78.00% disagreed and strongly disagreed respectively.

Discussion of Results

From the findings of this study, we observed that distraction from peers is a potent weapon that can hamper students' academic performance. This can result in negative modeling of peers who are not attentive and do not focus in learning activities in the class. The study revealed that 21% of the respondents agreed that the roof of their classroom is bad. In this case both rain and sun will affect their comfort in the classroom and equally their academic performance will be affected. Also 36% of the respondents agreed that their schools were located close to the road. And this may also account for the reason why 55% of the respondents agreed that their school environment was noisy. The volume of traffic that passes through the roads may be responsible for the noise. Ideally, schools are best located in serene environment away from the bustle of the city in order to have calm and peaceful learning classroom. These five significant variables observed in a learning environment, in this study can inhibit students' academic performance. This finding is in agreement with Sprinthall (1978), Isangedighi (1998), Danesty (2004), that learning environment significantly affects students' poor academic performance. It is possible that desk and bad roof of the classroom were not considered as important variables by the respondents that could affect their learning.

From the result of this study, out of the ten variables examined under family conditions, only five (5) were perceived by the respondents to have effect on their academic performance. On the issue of lack of textbooks, 31 percent of the respondents perceived it as militating factor to their learning. Also, 43% of the respondents perceived non- provision of opportunity for extra lesson as a factor that could affect their academic performance. Trekking to school was perceived by 38% of the respondents as a factor that can affect their academic performance. Truly, if the distance to a student's school is far, the child ought to use any means of transport that will help to prevent the tear

and wear of the body that will be caused by trekking. To achieve this purpose, students must have the financial support from their parents. The problem of food was perceived by 25% of the respondents as a factor that could hinder their academic performance. Taking breakfast to school is very important. Glucose derived from food is an essential ingredient that any child's brain needs to function at optimal level. It serves as primary fuel for the brain. Lastly, 38 percent of the respondents perceived lack of parental education as anathema to their academic performance in school. Dozens of studies show that children from poor families, or families where the parents are relatively uneducated, have lower academic performance than those from middle-class families (Bee, 2000). Poverty has a significant effect on children's academic performance over and above what the parents own genes may have contributed (Bee, 2000). This finding is expected because students who come from a high socio-economic background will perform better academically compared to their counterparts from low socio-economic background. This is because an affluent home is a better environment for better academic performance. Parents with high socio-economic status are in a position to give more parental help and motivation to their children than those of low socio-economic status. Children from high socio-economic background have greater access to learning resources at home such as extra lesson, computers, toys, textbook. In addition, they provide good shelter, food and healthy environment. Such positive conditions may affect their physical and mental development. This result is in consonance with previous findings of Sprinthall (1978), Morakinyo (2003), Rohana et al (2009) and Phillips (1998).

It is pertinent to support this finding in that we have cogent reasons to show that material life of the middle and upper class homes are secure and rich. These parents have appropriate knowledge having gone through school themselves to know the kind of stimulating experiences to provide for their children. Children coming from better home will have advantage in learning as a result of opportunities provided for them. These parents see education in terms of self-improvement, character building, cognitive development and total personality development.

There is no denying the fact that a learner is helped by the available resources for bringing desirable changes in his/ her behavior. How effectively such changes will take place in his/ her behavior depend on the quality and management of these resources. Therefore, availability of appropriate learning materials and facilities like teaching-learning aids, textbooks, library, calm and peaceful environment are indispensable elements that will enhance students academic performance. From the lenses of educational psychologists, learning depends upon the methods, the nature of learning experience and the socio-emotional climate available in the school system. These are the variables that constitutes quality environment for student learning.

Conclusion / Recommendation

The result of this study showed that learning environment, teachers' method of teaching and family conditions mediated students' academic performance in some key variables that were found to be significant.

Since the result revealed that there are some key elements that contribute to student's academic performance in learning environment, teacher's method of teaching and family conditions, we recommend that class size should be limited to the approved number of students that can be managed to a single teacher at time. Schools should be located in an environment free from external interference such as noise and pollution.

Teachers should enrich their teaching method by using good teaching aids and where necessary, source for materials that are not available through improvisation. The need to provide modern text books in school library is advocated. Furthermore, current researchers recommend that parents should provide incentives that would stimulate students' interest in learning and greater academic performance. Also, parents should see education as something that should be mutually encouraged by them and teachers. The view of low socio-economic parents that learning activities of their children is the teacher's job should be jettisoned. Both parents and teachers should create stimulating interest in children learning. Current researchers hold that equitable distribution of scarce resources by government will bridge the gap between the high and low income families and hence the need to provide adequate stimulating home environment for all student to learn and become productive citizens.

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