

Imperative Impact of Environment On Students' Academic Performance in Integrated Science in Ekiti State Tertiary Institutions

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Abstract:

The study examined the imperative impact of environment on students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. The study specifically examined the relationship between parental influence, home environment, school environment and students' academic performance in Integrated Science. The study adopted descriptive and ex-post facto research designs. The population for the study comprised of 68 (200 level) Integrated Science students in Ekiti State University, Federal University, Oye-Ekiti, and Bamidele Olumilua University of Education, Science and Technology, Ikere – Ekiti. Total enumeration was used because of the small population size. Environmental Factors Questionnaire (EFQ) and Students' Performance Inventory were used to collect data for the study. The questionnaire was validated by experts in Tests, Measurement and Evaluation. The reliability of the questionnaire was established using the Test re-test method. Data generated from this study were analysed using descriptive and inferential statistics. The findings of the study revealed that parental influence ($r = 0.519$, $p < 0.05$), home environment ($r = 0.471$, $p < 0.05$) and school environment ($r = 0.626$, $p < 0.05$) were significantly related to students' academic performance in Integrated Science. The study concludes that parental influence, home environment and school environment influenced students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. It was recommended among others that parents should give moral and financial support to students, while tertiary institutions should be supported and well-funded by the government at all level to create conducive environment for teaching-learning process.

Keywords: Environment, Parental Influence, Home Environment, School Environment, Students, Academic Performance,

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Introduction

Science is a special kind of discipline with peculiar attributes, prominent among is the style through which knowledge is search for. This tactic is known as the scientific approach. The scientific method is a sequential, rational, and organized process by which knowledge in science is sought (Adewale & Akujobi, 2016). The significance of science in our nation made the Federal Government of Nigeria, via the Federal Ministry of Education to introduce science subjects in the curriculum of the Nation's Secondary School. Integrated Science or Basic Science is a vital subject in junior secondary school curriculum and it deepens man's tomorrow to a large extent depending on the scientific improvements & development of productive activity. Okeya (2022) specified that Basic Science affects the creation of the philosophical global outlook and worldview principles, which develop the theoretical, conceptual philosophies of the surrounding world, the world in all their indices, including those encircling the intellectual, spiritual and social sphere

The academic performance of learners is the template for testing the educational quality of a nation, hence education is the best legacy a nation can offer its youth. This would propose that the development of any community or nation depends majorly on the quantum of education of such country (Bright & Achinegbu, 2017; Frank & Oyewole 2018; Aniele 2018; Olofin & Falebita, 2020). Education has become extremely competitive and commercialized in many countries. It is on the foundation of high academic performance that learners acquire better jobs. Academic performance has been known as a yardstick for self-worth and accomplishment. The consequence of education defines the quality of life, achievement, and status of people dwelling anywhere in the globe, and this is said to have been motivated by individual ambition (Bright & Achinegbu, 2017).

Academic performance is a complex behavior, studies have steadily shown that academic performance is not a consequence of any single factor; rather it is the outcome of the interplay of a large number of reasons. Academic performance is a vital parameter in measuring the students' success and this might not be attainable without positive ambition. Recently, observations and reports have revealed that success or high academic performance has been viewed as a herculean task to achieve by students. Poor academic performance is documented both at the secondary and tertiary levels of education in this country, Nigeria (Olofin & Olojo, 2022). The performance of learners at all levels of educational institutions in Nigeria has enticed a lot of criticism from time immemorial from a lot of people. Academic performance of students' decline in Nigeria had been viewed by many researchers hence they mentioned that the Nigerian educational system needed restructuring.

There are many reasons mentioned as the reason for high failure rates, they are bad study habits, low IQ, faulty teaching methods, flawed examination systems, social and economic discrepancies, environment among others. Environment includes parental influence, home environment and school environment. Parents or guardians are a major factor in the child's development, so that the child can make edge-way in life. Excellence academic performance may be spurred by positive ambition, and this has to be inspired via parental and guardians influence. The success of a child may be elicited by effective assistance from parents. The Parents level of literacy influences how they organize the home environment as well as how they relate with their children in promoting academic performance. The family has the likelihood to affect a child's academic performance. This is because it is the earliest environment of the child. The initial experience that would build the child's values, aspirations, emotions, likes, and behaviors is offered by the parents/family (Igoni, 2020).



What the child acquires at home and how his family lures him/her towards education add to the child's achievement in school (Ogenemaro, 2019).

Well-read parents can add to their children's learning via their day-to-day relationship with their children and involving themselves in their children's schoolwork. In Nigeria particularly in Ekiti State, most families are underprivileged and cannot easily afford three square meals, let alone assisting the educational needs of their children. This has serious effect on the learning and performance of less privileged learners in school. As such, students from such homes are compelled to skip classes, unable to do concentrate in school, and sometimes withdraw from school because of non-payment of tuition fees and other basic needs. All these, have significant consequences on the child's development (Fabunmi, 2018; Ushie, et al., 2012).

Home environment is additional key measure of the environment that may affect students' academic performance. The society that an individual lives could either make or mar the individual's ambition. Both good and bad society has an effect on students' ambition which could affect their academic performance. The school environment is another area of environment that could affect the students' academic performance. There are environments applicable for teaching-learning activities. Some institutions are situated in a conducive environment while some are in non-conducive environments for learning. Some institutions have learning amenities such as good classrooms, quality teachers, laboratories, library, good tables and chairs and so on while some did not have. All these could influence students' academic performance in Integrated Science in Ekiti State Tertiary Institutions.

In view of the above, the study examined the imperative impact of environment on students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. The study specifically examined:

1. the predominant environmental factor influencing students' academic performance in Integrated Science;
2. the relationship between parental influence and students' academic performance in Integrated Science;
3. the relationship between home environment and students' academic performance in Integrated Science; and
4. the relationship between school environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions

Research Question

1. What is the predominant environmental factor influencing students' academic performance in Integrated Science in Ekiti State Tertiary Institutions?

Research Hypotheses

1. There is no significant relationship between parental influence and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions.
2. There is no significant relationship between home environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions.
3. There is no significant relationship between school environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions.

Methodology

The study adopted descriptive and ex-post facto research designs. The population for the study comprised of 68 (200 level) Integrated Science students in Ekiti State University, Federal University, Oye-Ekiti, and Bamidele Olumilua University of Education, Science and

Technology, Ikere – Ekiti. The choice of 200 level students was considered more appropriate because a new university that was just founded was included in the population. Total enumeration was used because of the small population size.

Two research instruments were used to generate data for the study. These instruments were: Environmental Factors Questionnaire (EFQ) and Students' Performance Inventory. Environmental Factors Questionnaire (EFQ) consisted of two sections. Section A sought for socio-demographic data of the respondents while section B consisted of 15 items on parental influence, home environment and school environment. The questionnaire was validated by experts in Tests, Measurement and Evaluation. All the necessary corrections were made and were effected on the instrument. The reliability of the questionnaire was established using the Test re-test method. The responses from the questionnaires were correlated using Pearson Product Moment Correlation Analysis which yielded the reliability co-efficient of 0.802. The researcher was assisted by trained research assistants to administer the instruments. Data generated from this study were analysed using descriptive and inferential statistics. The research hypotheses were tested using Pearson Product Moment Correlation analysis and all were tested at 0.05 level of significance.

Results

Research Question 1: What is the predominant environmental factor influencing students' academic performance in Integrated Science in Ekiti State Tertiary Institutions?

Table 1: Descriptive statistics showing predominant environmental factor influencing students' academic performance in Integrated Science in Ekiti State Tertiary Institutions

S/N	Environment	No of Items	Total Mean	Avg. Mean	S.D.	Rank
1.	Parental Influence	5	11.19	2.24	0.71	2 nd
2.	Home Environment	5	11.28	2.26	0.63	1 st
3.	School Environment	5	10.06	2.01	0.68	3 rd

Table 1 summarises the predominant environmental factor influencing students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. From the table, parental influence has an average mean value of 2.24; home environment has an average mean value of 2.26; and school environment has an average mean value of 2.01.

Test of Hypotheses

Ho1: There is no significant relationship between parental influence and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions.

In testing this hypothesis, data on parental influence sub-variable of environment were collected from the responses of the respondents to items under Section B of EFQ (item 1 – 5) in the questionnaire. Data on students' performance in Integrated Science in Ekiti State Tertiary Institutions were collected from the performance inventory. Both were compared for statistical significance using Pearson Product Moment Correlation at 0.05 levels. The result is presented in table 2.

Table 2: Relationship between parental influence and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions

Variables	N	Mean	Stand Dev	r-cal	P-value
Parental Influence	68	11.19	0.71	0.519*	0.000
Performance in Integrated Science	68	3.42	0.52		

*P<0.05

Table 2 showed that the r-cal value of 0.519 is significant at 0.05 level of significance because the P-value (0.000) < 0.05. The null hypothesis is rejected. This implies that there is significant relationship between parental influence and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. Parental influence is moderately related to students' academic performance in Integrated Science.

Ho2: There is no significant relationship between home environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions.

In testing this hypothesis, data on home environment sub-variable of environment were collected from the responses of the respondents to items under Section B of EFQ (item 6 – 10) in the questionnaire. Data on students' performance in Integrated Science in Ekiti State Tertiary Institutions were collected from the performance inventory. Both were compared for statistical significance using Pearson Product Moment Correlation at 0.05 levels. The result is presented in table 3.

Table 3: Relationship between home environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions

Variables	N	Mean	Stand Dev	r-cal	P-value
Home Environment	68	11.28	0.63	0.471*	0.000
Performance in Integrated Science	68	3.42	0.52		

*P<0.05

Table 3 showed that the r-cal value of 0.471 is significant at 0.05 level of significance because the P-value (0.000) < 0.05. The null hypothesis is rejected. This implies that there is significant relationship between home environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. Home environment is moderately related to students' academic performance in Integrated Science.

Ho3: There is no significant relationship between school environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions.

In testing this hypothesis, data on school environment sub-variable of environment were collected from the responses of the respondents to items under Section B of EFQ (item 11 – 15) in the questionnaire. Data on students' performance in Integrated Science in Ekiti State Tertiary Institutions were collected from the performance inventory. Both were compared for statistical significance using Pearson Product Moment Correlation at 0.05 levels. The result is presented in table 4.

Table 4: Relationship between school environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions

Variables	N	Mean	Stand Dev	r-cal	P-value
School Environment	68	10.06	0.68	0.626*	0.000

Performance in Integrated Science	68	3.42	0.52		
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*P<0.05

Table 4 showed that the r-cal value of 0.626 is significant at 0.05 level of significance because the P-value (0.000) < 0.05. The null hypothesis is rejected. This implies that there is significant relationship between school environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. School environment is moderately related to students' academic performance in Integrated Science.

Discussion

The findings of this study revealed that there was significant relationship between parental influence and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. In consonance with the current findings, Wifag, et al. (2017) examined the role of environment in promoting students' academic performance. They concluded that the most effective factor on educational performance is the parental influence, society and school. Onwukwe, et al. (2017) investigated the influence of parents' or guardians' socio-economic status on academic performance of students, the result showed that students from low socio-economic backgrounds achieve less academically than those of high socio-economic backgrounds. Osuafor and Okonkwo (2015) investigated how family background of students influences their academic performance, and they concluded that family structure, parents' or guardians' occupation and educational level, did not have significant influence on students' academic performance.

It was also revealed that there was significant relationship between home environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. This is in tandem with Tokunbo, et al. (2018) who investigated factors influencing academic performance of student in colleges of education in southwest Nigeria. They concluded that personal condition, study habits, home-related factors and school factors affected students' academic performance.

It was further revealed that there was significant relationship between school environment and students' academic performance in Integrated Science in Ekiti State Tertiary Institutions. In line with this finding, Imeokparia (2018) examined the influence of environmental factors on academic performance of Biology student. He concluded that school environment was a significant predictors of students' academic performance in Biology. Adewale, et al. (2018) analyzed the possible factors that account for diverse academic performances in Science. They found out that teachers' factors, school's factor, students' factor and parents' factor were in that order responsible for variations in academic performances in the schools.

Conclusion

The study concludes that parental influence, home environment and school environment influenced students' academic performance in Integrated Science in Ekiti State Tertiary Institutions.

Recommendations

1. Parents should give moral and financial support to students, while tertiary institutions should be supported and well-funded by the government at all level to create conducive environment for teaching-learning process.
2. Students' performance in Integrated Science can be improved by use of computer assisted learning within the school environment.

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