

Parental Influence and Academic Performance of Senior Secondary School Students in Biology in Ekiti State

Ibukun Omolara Akinwumi (PhD)

Department of Science Education,
College of Education, Bamidele Olumilua University of Education, Science and Technology,
Ikere, Ekiti State, Nigeria

Funke Aina Falemu

Department of Science Education,
College of Education, Bamidele Olumilua University of Education, Science and Technology,
Ikere, Ekiti State, Nigeria

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ABSTRACT: *This study aimed to investigate the relationship between parental influence, learning environment, motivation, and the academic performance of senior secondary school students in Biology in Ekiti State, Nigeria. A mixed research design, including correlational and ex-post facto elements, was employed, utilizing both primary and secondary data sources. The study population consisted of 12,690 Senior Secondary School Two (SSS II) students in Ekiti State public secondary schools, with a sample of 300 students selected using stratified random sampling. Data were collected through a self-designed questionnaire titled "Parental Influence Questionnaire" (PIQ) and students' information records. The questionnaire gathered demographic information and assessed parental influence on students' academic performance, while students' information records provided academic performance data. The instrument's validity was ensured through expert review, and its reliability was established through the test-retest method. The findings of the study revealed significant relationships between motivation, parental/guardian influence, and learning environment influence with the academic performance of SS II students in Biology in Ekiti State. Specifically, motivation was found to have a positive impact on academic performance, parental/guardian influence significantly affected academic performance, and the learning environment had a significant predictive effect on academic performance*

KEYWORDS: parental influence, academic performance, students, biology

INTRODUCTION

According to Michael (2012), the study of living things, which includes people, falls under the purview of the scientific discipline known as biology. The study of biology may be broken down into several subfields, the most well-known of which include zoology, botany, ecology, genetics, morphology, anatomy, physiology, histology, microbiology, evolution, and cell biology, to name just a few. Biology has a role in a wide variety of social concerns, including biodiversity, genetically modified organisms, reproductive technologies, life extension, food production, the tourism sector (biological gardens), and the processing industries. As a result of the fact that all of these problems have been solved by making advances that cater to the requirements of humans, the twenty-first century has been dubbed by several researchers as "the age of Biology." The understanding of biology contributes to the prevention of environmental deterioration, including desertification, erosion, water hyacinth, and pollution of the land, air, and water.

According to the Federal Ministry of Education (2017), the primary goals of a biology education are to prepare students to acquire adequate laboratory and field skills in biology, meaningful and relevant knowledge in biology, the ability to apply scientific knowledge to everyday life in matters of personal and community health and agriculture, and reasonable and functional scientific attitudes. Without the guidance and support of their parents or other adults in the child's upbringing, it is possible that the youngster will struggle to succeed in later life. Positive ambition may be a driver of excellent academic success, and this is something that has to be stimulated via the influence of parents and guardians.

It is possible that a child's achievement might be attributed to the supportive environment provided by their parents. Literacy levels of parents are a factor in how they organise the home environment and how they communicate with their children to encourage strong academic success. There is the possibility of a child's family having an effect on the child's academic success. This is due to the fact that it is the first environment the child will experience. The experiences that a child has with his or her parents and other members of the family serve as the foundation for the child's values, goals, emotions, interests, and attitudes (Igoni, 2020). According to Ogenemaro (2019), a child's performance in school is influenced by both what the child learns at home and how his or her family encourages the child to continue their education.

The study of life is addressed in a number of scientific disciplines, one of which being biology. It is also one of the most important prerequisites for several life-saving courses as well as other biologically linked courses that students take in tertiary institutions, such as medicine, nursing, pharmacy, and other related fields. At the secondary school level, students who have aspirations of enrolling in any of these potentially life-saving programmes in college need to demonstrate that they have a solid foundational understanding of biology and have earned satisfactory grades in the subject.

The academic performance of students in Biology is not promising, despite the fact that the importance of this topic to the society cannot be overstated. For instance, in the state of Ekiti, pupils' academic performance in the subject has been on the decline in the years 2017, 2018, 2019, and 2020. This trend is expected to continue. There was room for improvement in the performance ratings, which ranged from 59.22 percent to 57.94 percent to 53.50 percent to 51.12 percent accordingly. As a result, this situation requires immediate treatment since human life is extremely valuable, and once it is gone, it can never be brought back. There have been a number of studies that have been conducted that have linked the performance of students in the subject of biology in senior secondary schools to a variety of factors. Some of these factors include the use of inappropriate instructional approaches by teachers, the absence of a laboratory either in part or in its entirety, and a lack of positive and effective ambition on the part of the students towards the learning of biology.

It is possible that adolescents' academic success and how well they adapt to life will be determined, at least in part, by the socioeconomic circumstances of their parents. The poor academic performance of students in Nigeria, particularly in the state of Ekiti, in recent years could be attributed to a combination of factors, including a shifting life pattern in some families and economic hardship that has left the majority of families unable to meet their responsibilities of ensuring that their children are healthy and literate in the home. A child's intellectual development and sense of aspiration are both influenced by the size of the household in which he or she grows up. This is due to the fact that, in a family with a high number of members, a child could not receive the necessary attention, particularly in his or her academics, because the family will have more people to provide for. Due to the fact that they have to provide for a large number of children, parents and guardians may find it difficult to accommodate issues such as homework, the payment of school fees, attendance at parent or guardian teachers associations, and many others. On the other hand, children in families with a smaller number of members are better able to receive the care and attention they need to succeed academically.

Inadequate financial support from parents can be another significant obstacle in the way of a student's capacity for academic achievement and personal growth. According to Moses and Tobira (2019), a student's academic success may be forecast using a series of social and economic elements that are present in the student's parents, family, and network. According to UNESCO (2014), children who come from families with poor socio-economic standing have a lesser chance of being successful in school. It is impossible to disregard the significant roles that students' social status and economic situation play in their motivation to achieve academic success since these elements are essential drivers of that ambition. Children in Ekiti State who come from households with greater levels of education appear to have higher aspirations, and they do go on to complete more advanced degrees.

It's not uncommon for there to be more possibilities for learning at home and at school when there are sufficient financial resources in the family, which are linked to the employment and educational

achievement of the parents or guardians. Parents who have completed additional education are in a better position to foster their children's academic development by engaging in day-to-day activities with their children and taking an active interest in their academic pursuits. The majority of families in Nigeria, and notably in the state of Ekiti, are economically disadvantaged and are unable to afford proper nutrition for their children, much alone provide for their children's educational requirements. This does have significant repercussions for the education and academic performance of pupils who come from less affluent backgrounds. Students who come from low-income homes often have no choice but to skip classes, struggle to complete their homework, and, in the most extreme cases, are expelled from school because their family cannot afford to pay for their education or meet other fundamental requirements. According to Fabunmi (2018) and Ushie et al. (2012), all of these factors have a substantial impact on the development of the child.

Another indicator of students' level of desire that may have an impact on their academic success is the learning environment at their schools. There are settings that are appropriate for educational and pedagogical endeavours. Some schools are located in locations that are beneficial to learning, while others are located in situations that are not beneficial to educational pursuits. In certain educational institutions, students have access to learning facilities such as nice classrooms, quality teachers laboratories, libraries, good tables and chairs, and so on, but other educational institutions do not. All of these factors could have an impact on students' academic success in biology classes in the state of Ekiti.

Students' levels of motivation can be an important indicator of how ambitious they are in terms of their academic achievement in biology. This may originate from a variety of sources, such as lecturers, administrators at the educational institution, members of the family, charitable organisations, the government, and so on. Observing one's own efforts being rewarded might serve as a catalyst for increased aspiration in a person. The student's overall academic performance might benefit as a result.

The self-determination scale was the final, but certainly not the least important, major indicator of ambition that this study assessed to impact students' academic achievement. It is possible for a person to have the self-determination to accomplish success in life regardless of the circumstances in which they find themselves. Because of this individual's self-determination, the person would have a strong resolve to fulfil his or her objective, which might lead to the individual excelling academically.

Bad study habits, low IQ, defective teaching techniques, erroneous test systems, social and economic inequality, and other factors have all been suggested as potential causes of high rates of failure. However, there are many other possible explanations as well. Academic performance (most particularly that of pupils in their last year of secondary school) has been strongly related with a variety of characteristics. According to the findings of an empirical study (Oyewole, Makinwa, & Ajayi, 2014), the majority of students in senior secondary schools in the state of Ekiti

have to deal with the challenges of coping with academic works under serious emotional strains on a daily basis. These emotional strains are caused by the fact that the students have to walk a long distance to school, the school environment is substandard, and their teachers are unmotivated.

Academic success has been measured in a variety of methods by researchers throughout the years, some of which include information record grades, grade point averages, results on standardised tests, teacher ratings, other cognitive test scores, grade retention rates, and dropout rates. The year is 2015 for Eric and Benedict. Therefore, the academic success of pupils is often evaluated with the help of ratings from teachers, tests, and examinations. When students feel personally validated and think that their effort counts and can impact or control the possibilities of their academic success, they are more likely to experience and demonstrate academic accomplishment. This makes it more likely that academic performance will be experienced. In point of fact, these motivate individuals to cultivate a sense of purpose and make them feel as though the educational experience is personally important to them.

Studies have shown that several teaching strategies have been used in an effort to improve students' academic performance in Biology in the state. Despite these efforts, the beneficial results that were anticipated have not yet been realised, despite the fact that these strategies have been implemented. It would appear that either very little or no research has been done on the topic of students' aspirations for their future careers in connection to their performance. A declining performance has become a common occurrence that has militated against the seamless transition from the secondary level to the tertiary level, particularly for the scientific students who need Biology to satisfy their entrance criteria. This is especially true for those students who are interested in pursuing careers in medicine or other health-related fields. Empirical reports have shown that some factors such as parental influence, learning environment, and motivation can make or mar students' performance.

The purpose of this study was to examine the relationship between parental influence and academic performance of senior secondary school students in Biology in Ekiti State. Specifically, the study sets out to investigate:

- i. the relationship between parents' or guardians' influence and academic performance of students in Biology.
- ii. the relationship between learning environment and academic performance of students in Biology.
- iii. the relationship between motivation and academic performance of students in Biology.

Research Hypotheses

1. There is no significant relationship between parent influence and academic performance of senior secondary school students in Biology.

2. There is no significant relationship between motivation and academic performance of senior secondary school students in Biology.
3. There is no significant relationship between learning environment and academic performance of senior secondary school students in Biology.

RESEARCH METHODS

The study adopted mixed research design (i.e. correlational and ex-post facto). These research designs were chosen due to the nature of the study. The researcher resolved to employ the two research designs because primary and secondary data were used in the course of this study. The two research designs were considered most appropriate because the level of students' academic performance in Biology in Ekiti State was measured with students' information record which was an existing data and not within the capacity of the researcher to manipulate hence it is a secondary data.

The population for the study comprised of all the 12,690 Senior Secondary School Two (SSS II) students in Ekiti State public secondary schools. The sample for the study comprised of 300 Senior Secondary School two (SSS II) students offering Biology in Ekiti State public secondary schools using stratified random sampling procedure. This was due to the fact that the study population was broken into three strata, based on the senatorial district in Ekiti State. Two research instruments were used to generate data for the study. These instruments were: self-designed questionnaire and students' information records. The questionnaire was titled "Parental Influence Questionnaire" (PIQ) and students' information record was used to elicit students' academic performance in Biology. PIQ was used to extract information from respondents and the questionnaire was stratified into two sections, identified with A, and B.

Section A contain information on demographic characteristics of the respondents which include age, class, parent or guardian educational qualification, religion, parent or guardian work status, parents' or guardians' place of work, place of residence and family background. Consequently, information in section B was used to ascertain the extent to parental factors influence student's academic performance in Biology in Ekiti State secondary schools. Meanwhile, various items on the selected measures of parental influence were demonstrated in the crafted questionnaire, this will enable the researcher to ascertain the respondent's opinion on the extent to which socio-economic factors boost student's performance.

The questionnaire was validated by experts in Guidance and Counselling, Test, Measurement and Evaluation, and Biology teachers. The instrument was subjected to face and content validity. The face validity was ensured by reviewing the items in clarity of terms to avoid confusion for respondents. In ensuring the content validity, experts ensured that the items in the questionnaire contained and represented adequately the traits being measured as related to students' ambition in Biology in Ekiti State. All the necessary corrections were made and were effected on the instrument.

The reliability of the instrument was established using the Test re-test method. The questionnaire was administered twice on the thirty (30) students outside the sample area at two weeks interval. This was done to justify the respondents' consistency. The responses from the questionnaires were correlated using Pearson Product Moment Correlation Analysis which yielded the reliability coefficient of 0.78. This was considered high enough for establishing the reliability of the instrument. The students' information records are secondary data which already existed hence cannot be adjusted or manipulated by the researchers.

The researchers took permission from the principals of the selected schools for this study assuring them that the research is for pure academic purpose and has nothing to do with their personality and thereby assure them of confidentiality. The questionnaires were distributed to the respondents and were retrieved back after they have filled them. The researcher collated and analysed the questionnaires. Finally, the information records of students selected for the study were accessed with the permission of the principals and the class teachers of the selected schools as these were used to obtain information about their performance in Biology in Ekiti State Secondary Schools II.

Data generated from this study were analysed using descriptive and inferential statistics. The research questions were answered using descriptive statistics such as frequency count, percentages, mean and standard deviation. The research hypotheses were tested using multiple regression analysis and all were tested at 0.05 level of significance.

RESULTS

Testing of Hypotheses

Hypothesis 1: There is no significant relationship between parental influence and academic performance of senior secondary school students in Biology

Table 1: Relationship between parental influence and academic performance of senior secondary school students in Biology

Variables	N	Mean	Stand Dev	r-cal	P-value
Parental Influence	300	9.24	0.96	0.448*	0.000
Academic Performance in Biology	300	60.90	15.29		

* $P < 0.05$

Table 1 showed that the r-cal value of 0.448 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 academic performance of senior secondary school

students in Biology. Parental influence is moderately related to academic performance of senior secondary school students in Biology.

Hypothesis 2: There is no significant relationship between motivation and academic performance of senior secondary school students in Biology

Table 2: Relationship between motivation and academic performance of senior secondary school students in Biology

Variables	N	Mean	Stand Dev	r-cal	P-value
Peer Pressure	300	7.58	1.53	0.387*	0.000
Academic Performance in Biology	300	60.90	15.29		

*P<0.05

Table 2 showed that the r-cal value of 0.387 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 motivation and academic performance of senior secondary school students in Biology. Motivation is moderately related to academic performance of senior secondary school students in Biology.

Hypothesis 3: There is no significant relationship between learning environment and academic performance of senior secondary school students in Biology

Table 3: Relationship between learning environment and academic performance of senior secondary school students in Biology

Variables	N	Mean	Stand Dev	r-cal	P-value
Learning Environment	300	7.08	0.95	0.442*	0.000
Academic Performance in Biology	300	60.90	15.29		

*P<0.05

Table 3 showed that the r-cal value of 0.442 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 learning environment and academic performance of senior secondary school students in Biology. Learning environment is lowly related to academic performance of senior secondary school students in Biology.

DISCUSSION

Result presented suggests the existence of positive and significant relationship between parental influence and academic performance of SS II students in Biology in Ekiti State. The findings also justify the fact that parents wish and support goes a long way in ensuing that students attain their academic ambition in life. The findings from this study is in consonant with that of Ampofo and Osei-Owusu (2018), Walter (2018); Musarat, et al (2015); Udida, et al (2014) whose study submitted that parental influences play a lead and significant role in accelerating students' academic performance especially in the less developing countries where children are bend to listen and not argue with their parents.

Lastly, it was found out that there is existence of positive and significant relationship between the learning environment and performance. The result thus suggests that environment is a significant indice that determine students' academic performance in Biology in Ekiti state SS II students. The result from this study is in support of Kingori and Kingori (2019) theory of ambition which submitted that students studying in an unconducive and noisy environment are likely to have problems of assimilation and retention and this will undoubtedly affect their academic performance and future ambition. In support of Kingori and Kingori (2019) theory of ambition, (Oyewole, et al, 2014), Mick (2011), reported that the school environment determines the extent to which school settings promote students' safety and health. Environmental factors can impact the developmental, social, emotional, and physical health of students which may, in turn, influence their academic performances.

Conclusion

Based on the findings, motivation, parental/guardian influence, and learning environment influence significantly affects academic performance of SS II students in Biology in Ekiti state

Recommendations

1. Parents and stakeholders in education must be encouraged to adopt specific techniques and strategies aim at building a strong positive image for children's ambitions that commensurate their abilities. This will in fact help students feel emotionally and psychologically ready and not overwhelmed by the academic task ahead.
2. In this study, parental/guardian influence is strongly linked with their children's academic performance. Hence, it is therefore recommended that parents should monitor the academic activities of their children as this will help achieve excellent academic performance.
3. It is recommended that parents should motivate their children through reward giving, word of appreciation and encouragement as this will further help them achieve successful academic performance.

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