

DETERMINANTS OF ADOLESCENT ACADEMIC PERFORMANCE IN NIGERIAN SECONDARY SCHOOLS

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Abstract

This is a survey study that investigated the factors that determine adolescents' academic achievement. A total of 300 senior secondary school students randomly selected from different secondary schools were used as samples for the study.

The AP5FI (Academic Performance 5-Factor Inventory) by Aremu (2002) was used to collect data for the study. The instrument has a coefficient value of 0.79 (Aremu and Sokan, 2002). The data collected with the instrument was analyzed using multiple regression analysis.

Two research questions were raised and tested in the study. The result of data analysis showed that the combined effect of the five independent variables on students' academic achievement was statistically significant ($F=9.57, P<0.05$). The result also showed that the causations resident in child and family made the most significant contribution to students' academic achievement ($P<0.05$) while the other independent variables - school, society and government - did not contribute significantly ($P<0.05$).

Recommendations were made to affect the poor academic performance in secondary school. The implication of the findings of this study is that stakeholders in the educational system should present education in a light that would motivate the child. Parents and guardians should provide an academically stimulating environment for the children at home in order to enhance their academic performance.

Introduction

Education is often said to be a powerful instrument for developing intellectual abilities, for shaping cultural attitudes and for acquiring knowledge and skills. The quantity and quality of knowledge and skills that have been acquired through the process of education is often assessed through examination or tests. The performance of secondary

school students in both internal and public examinations leaves little to be desired with regards to our educational system. Often, the society blames the government, the child and his/her family. Studies have however shown that academic performance can be affected by a host of factors such as student ability, developmental crisis, lack of text books, teachers and school environment (Lewis, 1968).

Oyetunji (1976) in his work emphasized the need for teachers to be trained in his/her subject of specialization. Oluyeba (1989) said that most students get very high marks in their schools, but perform woefully in the School Certificate Examination because teachers score their students very high when indeed the students least deserve such grades. The false sense of security so created in the students always led to their dismal performance in public examinations.

The role of the family in the academic performance of the child has also been investigated by scholars. Rollins and Thomas (1979) found that high parental control was associated with high achievement. Cassidy and Lynn (1991) included a specific factor of the family's socio-economic status, crowding, as an indicator of how being disadvantaged affects educational attainment. They found that a less physically crowded environment, along with motivation and parental support, associated with higher educational levels of children.

Another factor that may contribute to academic achievement is the child himself. Hermans (1970) studied the characteristics of high achievement motivation person and summarized that the achievement motivated individual: "Has a high aspiration level in so far that it does not reach beyond his capacities; has a strong striving for upward mobility; persists for a long time when confronted with a task of intermediate difficulty; when interrupted while working at a task, wants to accomplish, has a strong tendency to resume the task, bases his choice of task partner on the competence of the other; seeks recognition by performing well in his work; likes to perform well and has a dynamic time-perception and feels things are happening quickly."

These traits are believed to be essential in doing well in school. Crockett (1962) noted that people who are highly motivated to achieve and set moderate realistic vocational goals often perform better in school and attain a higher level of education.

The aim of this study is to investigate the determinants of adolescents' academic performance in our secondary schools.

The aim of this paper is to examine the determinants of adolescent academic performance in Nigerian secondary schools.

The objectives of this paper are as follows:

1. To ascertain the causes of determinants of adolescent academic performance in Nigerian secondary schools.
2. To discuss types of academic performance.
3. To examine the reasons for academic performance.
4. To make recommendations as to how academic performance can be improved in some secondary schools in Ibadan.

Statement of Problem

Nigeria today is witnessing mass failure in schools that are of high dimension. These include the general failure in English and Mathematics, parents non-academic background, poor academic environments, students laxity; these are problems that cut across the nation, and hence they require solutions.

Research questions

1. What is the joint effect of family background, school environment and students' personal attributes on the academic achievement of students?
2. What are the relative contributions of family background, school environment and students' personal attributes to predicting adolescents' academic performance.

Methodology

This is a survey study in which questionnaires were employed in collecting data from respondents.

Students from various secondary schools in Ibadan were as subjects of this study. Random sampling technique was used to select the 300 respondents who participated in the study. 167 (55.7%) of the respondents were male, 127 (42.3%) were female while 6 (2.0%) did not indicate their sex. Their age range was from 14-19 with a mean age of 14.58.

Aremu (2002) AP5-FI – Academic Performance 5-Factor Inventory was used in the collection of data for this study. The instrument has a coefficient value of 0.79 (Aremu and Sokan 2002). The self-report inventory is made up of two parts which consist of questions

or statements to elicit the students personal data such as age, sex, school and class. The second part is made up of five sections that assess factors that can predict academic achievement. Section A assesses causations resident in the child; section B assesses causations resident in the family; section C assesses causations resident in the school, Section D assesses causations resident in the society; and section E assesses causations resident in the government.

The response format for Sections A and B are: 5 = very much like me, 4 = like me, 3 = not sure, 2 = unlike me and 1 = very much unlike me. The response format for Sections C,D and E are: 5 = strongly agree, 4 = agree, 3 = not sure, 2 = disagree and 1 = strongly disagree.

Academic achievement was assessed by obtaining scores from Mathematics and English obtained in the third term examinations. The average of these scores is obtained to get the scores used to assess academic achievement.

The researcher collected fifty (50) out of the three hundred (300) samples used for this study and collected the remaining two hundred and fifty data from five other colleagues. Only secondary school students were used in the study.

The multiple regression analysis was used for data analysis, using a 0.05 level of significance.

Results

Research question 1: What is the combined effect of the independent variables on adolescents' academic achievement?

In the table below a combination of the independent variable is used in predicting adolescents' academic achievement.

Table 1: Summary of Regression Analysis

Sources of variation	DF	SS	MS	F	P
Due to regression	5	1846.74	369.35	9.57	.000
Due to residual	294	11353.26	38.62		
Total	299	13200.00			

R =.374

R² = .125

Standard Error of Estimate (SEE) = 6.214

The above table shows that the combined effect of causations resident in the child, family, school, society and government on adolescents' academic achievement is statistically significant ($F = 9.57$, $P < 0.05$). This implies that the factors when taken together would effectively predict the adolescents' academic achievement.

Using the multiple regression analysis as show in table 1, it can be observed that $R = .374$ and $R^2 = .125$. This shows that 12.50% of the variance of academic achievement was accounted for by the five variables put together.

Research question 2: What is the relative contribution of each independent variable in predicting students' academic achievement?

Table 2: Relative contribution of each of the five variables

Variable	B	Std. Error B	Beta	T	Sig
Constant	45.598	3.316		13.753	.000
Causation resident in the					
Child	-.340	.053	-.414	-6.398	.000
Family	-.131	.055	.158	2.369	.018
School	2.572E- 02	.030	.057	-.856	.393
Society	2.687E- 02	.036	.051	.752	.453
Government	6.269E- 02	.042	.090	1.508	.133

The five predictive variables contribute differently to the students' academic achievement as seen in the standard regression weights (Beta) value observed in each of the variables.

The table above shows that causation resident in the child made the highest level of contribution to the prediction of the students' academic achievement with a beta value of = -.414. This, however, is statistically significant (Beta = -.414, $t = -6.398$, $df = 294$, $P < 0.05$).

The next significant variable in the prediction of academic achievement is the family with a beta value of -158. The other variables

did not contribute significantly to the prediction of academic achievement.

Discussion of findings

The results obtained showed that a combination of the causations resident in the child, family, school, society and government when taken together could effectively predict academic achievements among adolescents. The observed F-ratio of 9.57 significant at 0.05 level is an evidence of this. Furthermore, the coefficient of multiple correlation of .374 and multiple R^2 of .125 showed the magnitude of relationship between academic achievement and the combination of the five independent variables. The result indicated that a linear relationship of the independent variables accounted for 12.50% of the total variance in academic achievement among the adolescents.

The result on table 2 showed the contribution made by each of the independent variables to the prediction of academic achievement. The t-ratio values associated with each independent variable indicated that the child and the family were the highest significant contributors to the prediction of adolescents' academic achievement.

The finding of this study that causations resident in the child can affect academic performance is supported by work of Butler and Uren (1960) who have shown that lack of interest on the part of the students can make them to perform poorly academically. Personal ambitions on the part of the students motivate them to learn. Folayan (1980) stressed the importance of interest in a student in order to attain effective learning and to help the teacher accomplish effective teaching.

The finding of this study that the family contributes significantly to the prediction of academic performance is in agreement with the findings of Cassidy and Lynn (1991) that found a statistically significant correlation between academic achievement and family environment. A highly stimulating environment promotes optimal growth and development while a poor non-stimulating environment in terms of the family's socio-economic status deprives the child from reaching his or her optimal endowed ability. Yoloye (1974), Nile (1979), Adelusi (1982), Shehu (1979), Abdullahi (1984, 1986) all confirm that socio-economic status as a factor has positive and significant relationship with the student's academic achievement.

Though this study refutes it, other studies have shown that the school environment plays an important role in determining academic achievement (Mackenzie, 1983; Purkey and Smith, 1983).

Conclusion and Recommendations

The findings of this study have therefore shown that of the five investigated variable, only the child and the family significantly contributed to the prediction of academic achievement in adolescents. This implies that stakeholders in the educational system may have to look beyond just the school environment to the child and his/her family in order to find solution to the poor academic performance among adolescents in our secondary schools.

It is recommended therefore that the school through the teachers and administrators should try as much as possible to present the content of education in such a way that the child will be able to relate it to his/her future success in life and hence motivate the child not only to come to school but also to make the best out of schooling. The family should be carried along in every educational and extracurricular programmes being organized by the school so as to encourage the parents and guardians to pay their roles effectively in providing educationally friendly environment for the child at home. If these measures are properly executed, poor academic performance in our schools will be a thing of the past.

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