

Parents' Socio-Economic Status and Academic Achievement of Physics and Mathematics Students in Colleges of Education, Adamawa State, Nigeria

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ABSTRACT

This study examined the relationship between socio economic status and students' academic achievement in Colleges of Education in Adamawa state. A sample of 312 NCE students was randomly selected for the study from the two colleges of education within the state. The study adopted the correlational design. A questionnaire tagged "Questionnaire on Socio Economic Status" was used to collect relevant data. The instrument was duly validated by experts. The reliability of the instrument was determined using Cronbach alpha method giving reliability coefficient of 0.83. Linear regression statistics was used to test the null hypotheses at 0.05 level of significance. The results showed that: there is significant relationship between parents' level of income and Physics students' academic achievement in colleges of education and there is significant relationship between parents' level of education and Physics students' academic achievement in colleges of education. Based on the findings, it was recommended among others that government should formulate policies such as scholarship for students from low socio-economic status and soft loans for the parents to enable such students to have equal opportunity to education as children from high socio-economic status.

Key Words: Parent, socio economic status, academic achievement.

I. INTRODUCTION

Parents are the first teachers that taught their children. Parents are critical to students' career development and academic advancement. Parents related factors such as education and Socio-Economic status are of vital importance in effecting students' educational achievements. They are like backbone in providing financial and mental confidence to students (Azhar, Nadeem, Naz, Perveen & Sameen, 2013). Ojimba (2013) stressed

that achievement in mathematics and science is a function of many interrelated variables such as students' ability, attitudes and perceptions, socio-economic variables, parent and peer influences, and school related variables. Parents may play a more dominant role in a child's education than peer group. The impact of the parent's socioeconomic status and their involvement in their child's educational achievement has been of great concern to many researchers. It is widely believed that the parent's socioeconomic status has a relatively strong impact on students' academic achievement compared to other variables (Vellymalay, 2012).

Socio-Economic Status (SES), according to Ojimba (2013) is a term used to summarize a variety of factors including parental education and occupations that influence student performance. Simich-Dudgeon and Weinstern-shor cited in Ojimba (2013) found that other socio-economic characteristics (e.g. parents' education, income, median age, home ownership, number of children) taken into consideration, students are more likely to succeed academically if their parents actively support their learning. They outlined the socio-economic roles of parents in students' achievement as: a) Provide a home environment that supports children's learning needs, b) Volunteer in schools as aides or in other roles, c) Monitor children's progress and communicate with other personnel and d) Tutor children at home to reinforce work done in school.

Children's' achievement in school was directly correlated with the mother's level of education as mother is usually the first teacher. Parental occupation has a significant effect on children's academic achievement. Good parental occupation has a positive effect on the academic achievement of students. A study by Saifi and Mehmood (2011) on the effect of socio-economic status on students' achievement they used income, parents' education and occupation, material

possessed at home, transport and servants as the indicators of socio-economic status. The findings of the study revealed that parental education, occupation and facilities at home affect the student's achievement. Parental employment is expected to have significant effect on the welfare of their children. Bakken cited in Gabriel, Muli, Muasya, Maonga and Mukhungulu (2016) points out that, as far as academic performance is concerned, parental occupation might have both positive and negative impact.

A large body of researches conducted that investigated the relationship between socio economic status and academic achievement revealed that the two variables are related. For instance, Abdu-raheem (2015) investigated relationship between parents' socio economic status and students' academic achievement. The researcher found that there was statistically significant relationship between parents' socio-economic status and academic performance of secondary school students. Gemechu (2018) also investigated the relationship between parents' socio economic status and academic achievement and found that family income might affect both sexes on their academic achievements. Gemechu (2018) supported this by saying that familial education and socio-economic status have an impact on students' academic achievements at any level of education. Students with families who completed college education tend to achieve at the highest levels. Students whose families were well educated had far better statistical chance of participating in tertiary education.

Soharwardi, Arooj, Nazir and Abida (2020) conducted a study to find out the impact of socioeconomic status of the parents on the academic performance of their offspring. The study is an effort to determine this impact empirically. The researchers tested the impact of some socio-economic factors such as family background, father education, mother education, number of children interested in education, facilities provided by the government for children's education and decision about a child's future on the academic record of students. The findings of the study suggest that the income of father and education of both father & mother have a positive impact on the academic performance of the students. Mother education, however, has a greater impact on the academic outcomes of the students as compared to father education. Moreover, the strong family background and education facilities provided by the government also enhanced the performance of the students in the studied sample.

Soharwardi, et al (2020) asserted that socio economic status of parents, their education and reading habits are linked to each other. Moreover, parental education and reading habits have a significant influence on their kid's motivation towards learning. Cooley (2013) study American schoolchildren and postulates that only 36% of parents from the lowest-income quintile read books daily, while the comparable figure from the highest-income quintile is 62% parents who read books every day. Cowen (2011) is of the opinion that parents with higher socioeconomic status are in a better position to improve the academic activities of their children as compared to parents with low socioeconomic status. However, some times the educational performance of these students is more questionable and controversial because the children do not follow their parent' training and do not get a good career. In addition, children with high socioeconomic status are more at risk of depletion, grade and math problems than children from low-status families (Agboola & Tsai 2012). It is against this background that this work is carried out to investigate the relationship between parents' socio – economic status and students' academic achievement in Colleges of Education in Adamawa state.

II. PURPOSE OF THE STUDY

The study investigated the relationship between parents' socio economic status and students' academic achievement in Adamawa state, Nigeria. Specifically, the study sought to determine the relationship between:

- i. Parents' level of income and students' academic achievement in Colleges of Education.
- ii. Parents' level of education and students' academic achievement in Colleges of Education.

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significant.

H₀₁: There is no significant relationship between parents' level of income and students' academic achievement in Colleges of Education.

H₀₂: There is no significant relationship between parents' level of education and students' academic achievement in Colleges of Education.

Methodology

The study adopted a correlational design. The study was carried out in the two Colleges of Education in Adamawa state. The target population for the study is all the science students in Federal

College of Education, Yola and College of Education Hong both in Adamawa state, Nigeria. The sample of the study consisted of 312 NCE I, II and III Physics and mathematics students selected using simple random sampling technique. The study use questionnaire tagged “Socio – Economic Status Questionnaire with provision for students’ end of session Cumulative Grade Point Average CGPA. The CGPA is self reported by the students. The questionnaire consists of two sections. Section A seeks information such as level of NCE while section B consist of 12 items seeking information pertaining to socio – economic status factors. The instrument is based on a 5-point Likert scale of

strongly agree (5), agree (4), Undecided (3), disagree (2), strongly disagree (1). The null hypotheses were tested using regression analysis.

III. RESULTS AND DISCUSSION OF FINDINGS

Hypotheses testing

The null hypotheses were tested using regression analysis.

H₀₁: There is no significant relationship between parents’ level of income and students’ academic achievement in Colleges of Education.

Table 1: Summary of Linear Regression Analysis of Relationship between Parents’ Level of Income and Students’ Academic Achievement in Physics

Model		Sum of Squares	Df	Mean Square	F	Sig.	R value	R square
1	Regression	32.693	1	32.693	279.891	.000 ^b	.708 ^a	.501
	Residual	32.589	279	.117				
	Total	65.282	280					

a. Dependent Variable: Physics Academic Achievement

b. Predictors: (Constant), Parents' level of income

Analysis in Table 1 shows the result of linear regression conducted to test whether significant relationship exist between parents’ level of income and students’ academic achievement. The results show that there is significant relationship between parents’ level of income and students’ academic achievement, $F_{(280, 1)} = 279.891$,

$p < 0.05$. $r = 0.708$. The results also show that parents’ level of income explains 50.1% of variance in students’ academic achievement.

H₀₂: there is no significant relationship between parents’ level of education and Physics students’ academic achievement in Colleges of Education.

Table 2: Summary of Linear Regression of Relationship between Parents’ Level of Education and Students’ Academic Achievement in Physics

Model		Sum of Squares	Df	Mean Square	F	Sig.	R value	R square
1	Regression	12.788	1	12.788	67.968	.000 ^b	.443 ^a	.196
	Residual	52.494	279	.188				
	Total	65.282	280					

a. Dependent Variable: Physics Academic Performance

b. Predictors: (Constant), Parents' level of education

The results in Table 1 show that there is significant relationship between parents’ level of education and students academic achievement in colleges of education in Adamawa state $F_{(280, 1)} = 67.968$, $p < 0.05$. Hence, the null hypothesis is rejected. This means that there is significant relationship between parents’ level of education and Physics students’ academic achievement in Colleges of Education. The results also show how parents’ level of education explains the variance in

the academic achievement. The results show that parents’ level of education explained 19.6% of the variance in students’ academic achievement. Parents’ level of education and students’ academic achievement were found to have moderate positive relationship which is indicated by r value = 0.443.

IV. DISCUSSION OF FINDINGS

The finding of the study revealed that there is significant relationship between parents' level of income and students' academic achievement. This finding is in line with that of Yousefi (2010) who found positive correlation between family income and academic achievement. The findings of the study is supported by the work of Lacour and Tissington (2011) who discovered that low achievement is closely connected with lack of resources. It is contrary to that of Ebeunuwa-Okon (2010) who discovered that financial status do not significantly influence academic performance. The researcher believed that enhanced academic performance is a matter of personal determination than financial determination. Students with better income resources can access to quality educational experience. That may be the reason why these students showed better academic performance.

The finding of the study revealed that there is significant relationship between parents' level of education and Physics students' academic achievement in Colleges of Education. This finding agrees with that of Ogunshola and Adewale, (2012) who reveals that students' mean score was observed to be higher with educated parents compared with students from uneducated parents. Also the results are consistent with the study of Nair (2012) who stated that, the parents' education has a significant effect on academic achievement of the students. The finding of the study is in concordance with that of Asikhia (2010) who asserted that children raised by parents with high qualifications are more inquisitive towards learning compared with those children from low educational qualification. Ogunshola and Adewale (2012) also agreed that educational qualification of parents is a significant factor that affects the academic performance of students.

V. CONCLUSION

It is concluded that there is significant relationship between parents' level of income and students' academic achievement. The study also concluded that there is significant relationship between parents' level of education and students' academic achievement.

VI. RECOMMENDATIONS

Based on the conclusions the researchers recommend the following;

1. Parents should provide financial support to their children to enhance their academic performance.

2. Government should formulate policies such as scholarship for students from low socio-economic status and soft loans for the parents to enable such students to have equal opportunity to education as children from high socio-economic status.

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