

Parental Involvement as a Determinant of Achievement in Senior Secondary Geography in Cross River State, Nigeria: Implications for Sustainable Development Education

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Abstract

This study investigated parental involvement as a determinant of students' achievement in senior secondary Geography in Cross River State, Nigeria. To achieve this purpose, one research question and one hypothesis guided the study. The correlational survey research design was used for the study. The population for this study was 11,321 SSII students comprising 5,462 males and 5,859 females. The multi-stage sampling procedure was used to select 386 SSII Geography students. Two research instruments - The Students' Parental Involvement Assessment Scale (SPIAS), and Geography Achievement Test (GAT) developed by the researchers were used for data collection. The instruments were validated by five experts in the Faculty of Education, University of Nigeria, Nsukka. Cronbach's Coefficient Alpha was used to test the internal consistency of SPIAS which gave 0.81. While Kuder Richardson 20 was used to establish that of GAT which yielded a coefficient of 0.75. Data collected were analysed using simple linear regression analysis. The correlation coefficients (R) and coefficient of determination (R^2) obtained from

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simple linear regression analysis were used to answer the research question. The null hypothesis was tested using the regression ANOVA at a .05 level of significance. The findings of the study revealed that parental involvement is a significant predictor of achievement in senior secondary Geography. Based on the findings of the study, it was recommended that parents should be actively involved in their children's education as this can promote their achievement in Geography.

Keywords: Parental involvement, students' achievement, senior secondary, Geography, determinant.

Introduction:

Parental involvement in everything a child does is very key. This is because the parents of every child have the invaluable responsibility of raising the child to conform to socially acceptable standards. Parental level of involvement could be quite fundamental in students' learning, and academic achievement. It is an investment in the education of one's children. It could also be seen as parents' efforts to contribute to their children's academic and social/emotional development (Erdem & Kaya, 2020; Adams et al., 2024; Nwafor et al., 2024a). These efforts could take different forms such as provision of school resources, learning facilities, checking of children's progress in school, monitoring of homework/assignments, and so on (Nwafor et al., 2024b; Ekpoto et al., 2024). These authors averred that a supportive and nurturing environment that enhances both guidance and independence is ideal for raising well-rounded and responsible children. Fan and Chen in Erdem and Kaya (2020) remarked that the parental level of involvement is defined by several different parental behaviours including parental aspirations for their children's academic performance, parents' communication with children, parents' participation in activities in school, parents' communication with teachers, parental rules, and the likes.

As it is obtainable in every other aspect of human endeavour, the place of parental level of involvement in the success of a child in school is very pivotal (Adams et al., 2024; Nwafor et al., 2024a). As crucial as parental level of involvement seems to be, evidence abounds from research that promoting parental involvement in school has been a difficult issue (Bailey, 2017). Parental level of involvement is seen by many school leaders as a principal asset for educating students and a critical factor for students to succeed (Washington, 2016). How well parents show concern in the upbringing of their wards tells a lot about what behaviour they manifest among their peers in school. Where fathers and mothers ensure their offspring always get the best attention they deserve, the likelihood exists such children might not be easily deterred by challenges arising from their academics or swayed by the interest of their peers in school (Ekpoto, 2023; Ekpoto et al., 2022). Rather, children from such homes are likely to develop a robust interest in their studies in a bid to impress their parents (Ekpoto et al., 2021; Akpama & Effiom, 2022).

Students' achievement in a particular venture including school subjects like Geography could be facilitated by several factors among which parental involvement in a child's academic voyage might be very pivotal. This is because it takes parents to guide children to the right path to follow to a successful career. Thus, the enabling environment provided by parents as canvassed in the foregoing serves as a trigger that needs not to be toiled with if desirable achievement must be attained in Geography in the current area of this study.

Literature Review:

Quite a few studies have been conducted on the place of parental involvement in students' achievements. Naite (2021) observed that students with highly involved parents had better academic performance and higher test scores in all the subjects compared to students whose parents were not involved in their education. The study suggested that parents should develop more consciousness of the importance of visiting and supporting their children in school. Otani (2020) reported that parental level of involvement is associated with students' achievement. The author further observed that students' attitudes and aspirations mediated the relationship between parental level of involvement and academic achievement. In particular, different associations between parental monitoring involvement and achievement are found for elementary and middle school.

Amponsah et al. (2018) discovered a significant positive relationship between parental level of involvement in education and students' academic performance. The researchers recommended that parents should play a leading role in supporting their children's education since they are the first to expose children to the social and academic world.

Mutodi and Ngirande (2014) remarked that home and family support were the most significant factors that determined a learner's performance. Most of the parents used in the study revealed they have good communication with their child's teachers and the school. Children's homework was considered to be important by each parent and they all assisted their children with homework. Hence, it could be concluded that by staying concerned and involved with their children's education, parents do impact positively on the academic achievement of the students.

Amunga (2013) studied the influence of parental level of involvement on students' academic performance in English Language among secondary school students in Likuyani Sub-County, Kakamega County. The study was aimed at ascertaining any form of parental level of involvement and investigating the influence of such level of involvement on the student's performance in the English Language. The research sought to ascertain whether or not students whose parents were actively involved in their education performed better in English Language. The objectives of the study were to investigate the parental level of involvement in the student's education and to establish the relationship between the parental level of involvement and academic performance in the English Language. The study used the causal-comparative research (ex-post-facto) design. A questionnaire was used for data collection. A sample of 54 students was drawn from four secondary schools in Likuyani Sub County using a simple random sampling technique. Data was analysed for the study using descriptive and inferential statistics.

Findings showed that parental level of involvement has a significant influence on academic performance in English Language among secondary school students. This underscores the importance of parental level of involvement in their wards' education. Parents should therefore be sensitized to realize that their role in ensuring their children perform well by providing all their children's school needs and partnering with the school-organized activities as well as showing interest in their children's academic activities is very indispensable.

The study further established that most of the students (77.7%) were actively supported by their parents in providing for their academic needs. This means that parental level of involvement significantly impacted scholars' academic performance in the English language. The reviewed work is relevant to the present study in that it assessed the impact of parental level of involvement on English Language performance among secondary school students. It is however different from the current study in terms of the research design, subject, sampling technique, sample size, geographical location and statistical tools for data analysis.

Mudibo (2014) studied the impact of parents' involvement on students' academic success in secondary schools in Kenya. The study used a descriptive research design. The target population of the study comprised all form three students in secondary schools in Magarini Sub-County. A total of five students per school from the seventeen sampled schools were used for the study, giving a sample of 85 students. The instrument used to collect data was a questionnaire. Data was analyzed using quantitative statistics. The study revealed that to a greater extent, parental involvement ensured a sustainable and intellectually stimulating environment that promotes students' interest towards higher academic performance. The study is related to this present study concerning the variable of parental involvement which provides useful literature about the variable and its indicators. However, the two studies vary because, while the reviewed study was conducted on the impact of parents' involvement on students' academic success in secondary schools in Kenya, the present study is interested in the predictive influence of parental involvement on Geography achievement among senior secondary school students in Cross River State, Nigeria. Therefore, the two studies vary, which makes the present study very different and imperative.

Fajoju et al. (2015) studied parental involvement as a correlate of academic interest, attitude and achievement of primary school pupils in Edo State, Nigeria. Three research questions were posed and three hypotheses were formulated for the study. The ex-post facto research design was employed in the study involving a sample of 1,895 primary six pupils drawn from the population of 37,908 primary six pupils in Edo State, Nigeria. Parents' Involvement Rating Scale (PIRS) was employed in data collection. Data were analyzed using Pearson Product Moment Correlation. The result showed that parental involvement significantly influenced primary school pupils' academic achievements in English Language, Mathematics and Integrated Science and that the higher the parental involvement, the higher the achievement of pupils in the subjects. The study is therefore related to this present study concerning the variable of parental involvement which provided useful literature about the variable and its indicators. Nevertheless, the two studies varied in terms of location and target population. This difference in the two studies makes the present study essential.

Hanif and Alwi (2019) examined the impact of parental involvement on students' academic interests and performance. Two research questions and two hypotheses were developed. For this study sequential explanatory mixed method design was used. The population was students of higher secondary classes studying in Karachi. Quota sampling was used because the population was comprised of three groups of students including arts, commerce and science. A sample of 200 students of higher secondary classes in Karachi was used for the study. An in-depth interview was conducted with the ample faculty members to collect data. A questionnaire comprising two sections was developed for data collection from sample students. Data collected for the study were analyzed by using descriptive statistics, and ANOVA. The findings showed that parental involvement has a significant influence on students' academic interests. The reviewed study is therefore related to this present study concerning the variable of parental involvement which provides useful literature about the variable. However, the two studies vary because, while the reviewed study was conducted on the impact of parental involvement on student's academic interest and performance in Karachi, the present study is interested in the predictive influence of parental involvement on Geography interest and achievement among senior secondary school students in Cross River State, Nigeria. For this reason, the two studies are not the same, which makes the present study very crucial.

Purpose of the Study:

The study set out to investigate the proportion of variations in students' achievement in Senior Secondary School Geography accounted for by parental level of involvement in Cross River State.

Research Question:

The research question that guided the study was “What is the proportion of variations in students' achievement in Senior Secondary School Geography accounted for by parental level of involvement in Cross River State?”

Research Hypothesis:

The null hypothesis formulated for the study was “the proportion of variations in students' achievement in Senior Secondary School Geography accounted for by parental level of involvement is not significant ($p < .05$) in Cross River State.”

Research Method:

The study adopted the correlational survey research design. Nworgu (2015) asserted that a correlational survey explores the establishment of what relationship exists between two or more variables. It reveals the strength and/or direction of the relationship between variables. The study adopted the correlational design because this study aims to establish the proportion of variation in students' achievement in Senior Secondary School Geography accounted for by the parental level of involvement.

The population of the study is 11,321 senior secondary school two (SSII) students in the 282 public (State Government) secondary schools in Cross River State for the 2022/2023 academic session. The population comprised 5,462 male and 5,859 female students (Planning, Research and Statistics Department, Secondary Education Board, Cross River State Ministry of Education, 2022).

The sample size for this study was 386 respondents. The sample is made up of 185 males and 201. The sample size was determined using Taro Yamane's formula (Yamane, 1973). Multi-stage sampling procedure involving proportionate stratified sampling technique for selecting two Local Government Areas (LGAs) from each of the three Senatorial Districts of the State. The use of a proportionate stratified sampling technique was to ensure equal representation of the Senatorial Districts/LGAs in the State in selecting the respondents. Also, the purposive sampling technique was used to select 24 schools, four schools from each of the LGAs earlier selected. This was to ensure that only schools that have Geography teachers and at least 16 Geography students in SSII were used for the study. Lastly, the purposive sampling technique was used in selecting 386 students as the sample for the study. This was to ensure that only schools with Geography enrolment that will support the intended sample size were selected (i.e., having at least 16 Geography students in SSII).

The instruments used for data collection were two researchers-developed instruments – titled ‘Students' Parental Involvement Assessment Scale (SPIAS) and Geography Achievement Test (GAT).’ The first instrument, SPIAS was divided into two sections, A and B. Section ‘A’ deals with the demographic characteristics of respondents such as Name of school, Local Government Area, and gender of students. Section ‘B’ is made up of ten items on parental level of involvement.

The items of SPIAS are structured based on a four-point Likert scale with options of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1) for all positively worded items. The scoring was in reversed order for negatively worded items.

The second instrument is the Geography Achievement Test (GAT). GAT is a 20-item multiple-choice question in Geography. The items of GAT were adopted from past West African Senior Secondary Certificate Examination (WASSCE) in Geography for 2017, 2018, 2019 and 2020. The items were drawn from the following content areas in Geography - elements of weather and climate, weathering, rocks and soil; economic activities such as mining, farming, fishing, transportation, industries and industrialization. Each item of the GAT has four alternatives with one option as the key (correct answer). Each correct answer attracts a mark of 'one' whereas an incorrect answer attracts a mark of 'zero' during scoring. The maximum score obtainable is 20 whereas the minimum score is 0.

The instruments were validated by five experts in the Faculty of Education, University of Nigeria, Nsukka. Forty SSII students from two secondary schools in Akamkpa Local Government Area of Cross River State which were not part of the study sample were used for the trial test. Cronbach's Coefficient Alpha was used to test the internal consistency of SPIAS which gave 0.81. While Kuder Richardson 20 was used to establish that of GAT which yielded a coefficient of 0.75. With these reliability coefficients, the instruments were adjudged suitable for the study.

The two research instruments (SPIAS and GAT) were administered by the researcher with the help of Geography teachers in the selected schools and retrieved immediately after they have been responded to. However, the researcher observed that eight out of the 386 copies of the instruments administered were either mutilated or incompletely responded to by respondents. Hence, 378 copies of the instruments well-completed for the study by respondents were used for data analysis.

The data collated for the study were analyzed using linear regression analysis. The correlation coefficients (R) and coefficient of determination (R^2) obtained from simple linear regression were used to answer the research question. The null hypothesis was tested using the regression ANOVA - F at a .05 level of significance. The general form of the regression equation used in this work is $GA = \beta_0 + \beta_1(PLI) + e$.

$$GA = f(PLI)$$

The model above was written in a linear form as:

$$GA = \beta_0 + \beta_1(PLI) + e.$$

Where:

GA = Geography Achievement

PLI = Parental Level of Involvement.

β_0 = constant or regression intercept.

β_1 = the regression slope

e = the disturbance or error term

Given that we expect a positive relationship between the dependent and independent variables, a prior expectation was stated thus; $\beta_1 > 0$. The decision rule for testing the hypotheses

is to accept the null hypothesis if the probability value is greater than the .05 level of significance and reject the null hypothesis where the probability value is less than the .05 level of significance.

Results:

Table 1: Regression analysis of the proportion of variations in students’ achievement²

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.527	.279	.296	3.782

The result in Table 1 indicates that the correlation coefficient between parental level of involvement and students’ achievement in Senior Secondary School Geography was (*R*) of 0.527 with an associated coefficient of determination (*R*²) of 0.279. This coefficient of determination (*R*²) of 0.279 denotes that 27.9% variation in students’ achievement in Senior Secondary School Geography is accounted for by parental level of involvement in Cross River State.

Table 2: Regression ANOVA Test of Significance (*p*<.05) of the proportion of variations

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2076.642	1	2076.642	147.031	.000 ^b
	Residual	5383.833	376	14.318		
	Total	7460.475	377			

The result in Table 2 shows that the proportion of variation in students’ achievement in Senior Secondary School Geography accounted for by the parental level of involvement in Cross River State is significant ($F(1, 377) = 147.031, p = .000$). This is because the associated probability value (*p*-value) of .000 was less than 0.05 of the level of significance at which the hypothesis was being tested; thus, the null hypothesis (*H*₀) was rejected. They concluded that the proportion of variations in students’ achievement in Senior Secondary School Geography that is accounted for by parental level of involvement in Cross River State is significant.

Discussion:

The findings of the study showed that 27.9% of the variation in students’ achievement in Senior Secondary School Geography is accounted for by parental level of involvement in Cross River State. The findings further established that the proportion of variation in students’ achievement in Senior Secondary School Geography that is accounted for by parental level of involvement in Cross River State is significant. This finding agrees with that of Naite (2021), whose findings, among others, indicated that students with highly involved parents had better academic performance and higher test scores in all the subjects compared to students whose parents were not involved in their education. Similarly, the finding corroborates the outcome of the study by Amunga (2013) whose findings showed that parental level of involvement has a significant influence on academic performance in the English language among secondary school students. The findings of this study also align with the study by Mutodi and Ngirande (2014) who remarked that by staying concerned and involved with their children’s education, parents do have a positive impact on the academic achievement of the students. The finding of this study is also in line with

² **Note:** *R* = Correlation coefficient, *R*² = Coefficient of determination

Amponsah et al. (2018), who found that a significant positive relationship exists between parental level of involvement in education and students' academic performance. In the same vein, Otani (2020) concluded that parental level of involvement is associated with students' achievement. The above findings could be true because the more parents are involved in their children's learning in terms of checking their notebooks, requesting them to do their assignments and homework, buying relevant learning materials, and encouraging them to study hard, among others, the more likely they are to do well in school, and vice versa.

Conclusion:

From the findings of this study, it is therefore concluded that parental level of involvement has considerable predictive power on students' academic achievement in Geography. Thus, it can be deduced that poor or low levels of students' academic achievement in Geography can be attributed to their parental level of involvement. The study recommended that parents should be actively involved in their children's education as this can promote their achievement in Geography.

Implications for Sustainable Development Education:

The study establishes that a significant proportion of students' achievements in Geography is traceable to parental involvement. This has some vital implications for Sustainable Development Education. Firstly, this study's outcome emphasizes that where parents are adequately empowered to be actively engaged in their children's education, students are better prepared academically, which aligns with sustainable development goals (SDGs) focusing on quality education.

Also, encouraging parents to monitor assignments, provide learning materials, and create an enabling environment fosters a culture of lifelong learning. This approach supports SDG 4 (Quality Education) by enhancing educational outcomes and bridging gaps in student performance.

The emphasis on parental involvement helps mitigate disparities in educational achievements caused by socioeconomic factors. When parents across all demographics actively participate in their children's education, it can lead to a more equitable educational landscape.

By involving parents in students' academic journeys, the study underscores the importance of community engagement in education. This involvement strengthens the fabric of communities and contributes to sustainable development by ensuring inclusive and equitable quality education.

Since the study focuses on Geography, parental involvement can enhance students' interest and understanding of environmental issues. This contributes to sustainable development by preparing students to address global challenges such as climate change and resource conservation.

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