

Relationship between Socio-economic Background and Academic Performance of Automobile Mechanic Works Students in Lagos and Ogun States' Technical Colleges

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Abstract

This study examined the relationship between socio-economic background and academic performance of Automobile Mechanic Works students in Lagos and Ogun States' Technical Colleges, Nigeria. One research question and two hypotheses were raised for the study. The descriptive survey research design was used for the study. A total of 120 students' population were used as sample due to small size, hence, no sampling was used because of the manageable size of the population. The instrument used to collect data was a self-developed questionnaire named "Parents' Socio-economic Background Questionnaire" (PSBQ) was utilized to collect data for the study. The data collected were analyzed using descriptive statistics (mean, for research question and Multiple Regression, Analysis of variance (ANOVA) for the hypotheses). One of the findings from the study shows that academic performance of automobile mechanic works students is significantly related to and influenced by parents' financial status. Based on the findings, the study recommended that among others, consistent importance should continue to be accorded parents' education as it affects students' performance in the study area.

Keywords: Parents' Educational Background, Parents' Occupation, Parents' Income, Socioeconomic Background, Academic Performance, Technical College.

Background to the Study

Education is one of the most important weapons to bring meaningful and objective changes in the way a nation or society is run. Education serves as a tool to remove primitive lifestyle, superstitious claims, orthodoxy and habitualized errors. Education is a tool and a prime-mover that provides contemporary skills, competencies, civilization and opportunities for people in a country or society which leads to socioeconomic, political and technological development of individual citizens and its aftermath of country wide infrastructural provisions in all sectors, allowing a steady productivity growth and economic advancement.

Education is also a behaviour changer which can reform an individual from stark ignorance to a well informed personality who will in turn contribute meaningfully to the progress of both his immediate and distant environment. It is in the light of this fact that Omoregie, (2018) submitted that any nation that fails to fully invest in its citizens' education is clearly asking for trouble. That is, such a trouble could emanate from under development, bad economy, dilapidated infrastructural facilities, crimes, youth restiveness, insecurity and political instability.

Therefore, a type of education that exposes its recipients to a world of lifelong work is Technical Vocational Education and Training (TVET). Uwameiye (2017) posited that TVET is all forms and aspects of education either in educational institutions, Universities, Polytechnics and Colleges of Education (Technical) or under their authority, by public authorities, the private sector, or through other forms of organized education, formal or non – formal, aiming at ensuring that members of the community have access to the pathway of lifelong learning.

It must be noted that one of the TVET institutions that promote life-long learning is the technical colleges in Nigeria. Technical colleges according to Oke and Olakotan (2017) are TVET institutions saddled with the responsibilities of equipping recipients with knowledge and skills needed to function effectively in the world of work. The goal of education at the technical college level according to Ekpenyong (2011) is to provide students with sound education that would enhance development of appropriate, social, mental, physical and skill competencies.

There are four technical colleges in Lagos State situated in Epe, Ikorodu, Agidingbi, Ikotun and Ado-Soba while there are seven Technical Colleges in Ogun State situated at Abeokuta, Ayetoro, Ig besa, Ajegunle, Ijebu-Mushin, Ijebu-Igbo and Ilara-Remo where only four are running automobile programmes. There are many TVET programmes in Lagos and Ogun States' Technical Colleges; one of them is Automobile Mechanic Works. Giri (2011) states that the study of

Automobile Mechanic Works involves self-propelled vehicles, consisting of four wheels, powered by internal combustion (heat) engine designed to convey passengers and goods. Automobile Mechanic Works is the study of sub-systems that are mutually dependent, coupled together to perform the functions of space and service utilities. The National Board for Technical Education (FRN, 2013) stipulated that the goals of Automobile Mechanic Works in the Nigerian technical colleges, is to produce craftsmen with good knowledge of the working principles of motor vehicles, the techniques and safety practices involved in the repair and maintenance works which objectives are safe, available, effective and affordable means of transportation for private and commercial purposes.

However, it would seem difficult to achieve these objectives as a result of the constraints posed on their realization. One of these constraints is related to the socio-economic background (SEB) of technical college students. Osonwa, Adebisi & Iyam (2013) stated that socio – economic status of the parents is a measure of their combined economic and social backgrounds that could be positively associated with a measure of good health, income, education, occupation type, residential location and social affiliation. Osonwa et al, (2013), itemized some ways through which the family socio – economic background could help the child. These include the ability of parents to provide good food in the right quantity and at the right time for their children, and initiating child's educational foundation through the choice of appropriate learning environment that will stimulate child's positive inclination towards education among others.

Socio-economic background of students is the enablement of parents to meet the financial needs of their children. These needs include good feeding, decent accommodation, good school to attend, ability to afford school and home related necessities. Parameters of socioeconomic status considered in this study include parents' education, parents' occupation and parents' income. The earning power and socio-economic class of the parents; Upper, Middle or Lower to a large extent may determine the aspiration and the academic performance of a student in Automobile Mechanic Works because of the need for various materials which include; drawing sets, personal computer with internet facility, improvising materials, needs for field works, feeding and personal care allowance. This may also determine the learning response of individual students to teachers instructions even when one teacher handles the proceedings. Socio-economic class of a student's parents can either make or mar his/her academic performance.

Academic performance is the evaluated learning outcome or change in behaviour of a student at the end of teaching/learning activities in comparison to the standard that has been set for evaluation processes through any or a combination of questioning, test, examinations, continuous assessments, experiments, homework, laboratory, field works or supervised industry – based training. Similarly, academic performance of a student depends on individual students, home and school environments, family income, parents' educational levels, residential location, parents' occupation, family size and parents' attitude towards education may have effect on students' prompt class attendance and completion of academic work which is an academic performance factor.

The National Board for Technical Education (NBTE) is charged with the academic performance standard setting as well as programme accreditation in the Nigerian Technical Colleges. The NBTE has specified that apart from other methods of evaluating student's academic performances in the Technical Colleges, 30% of academic time should be devoted to theories and related aspects while 70% of academic time should be devoted for practical training and related aspects. The National Business and Technical Examination Board (NABTEB) is responsible for the conduct of final examinations for Technical College students. NABTEB awards the National Technical Certificate (NTC) at the Ordinary Crafts Level, in general and trade subjects, while the Advanced National Technical Certificate (ANTC) for the Advanced Crafts Level, in general and trade subjects. In addition to the above certificate examinations, every technical college final year student is also expected to write and pass the Federal Crafts Certificate examination which is an internal arrangement as well as the Federal Ministry of Labour Trade Tests III, II & I which are competency-based (FRN, 2013).

Teaching and learning activities determine the performance of a learner during and after such activities to find out the level of understanding of each student. This understanding is dependent to a large extent on physiological and psychological state of a student which is also dependent on how much provision is made for a child's living and school needs, (Olewu & Oran, 2012).

Purpose of the Study

This purpose of this is to find out the relationship between Socio-Economic Background and Academic Performance of Automobile Mechanic Works Students in Lagos and Ogun States' Technical Colleges. Specifically, this study investigated the:

1. relationship between the upper, middle and lower socio-economic classes of parents' and academic performance of Automobile Mechanic Works' students in Lagos and Ogun States' Technical Colleges;
2. relationship between the collaborative interactions of upper, middle and lower socio-economic classes of parents' and academic performance of Automobile Mechanic Works' students in Lagos and Ogun States' Technical Colleges.

Research Questions

The following research question was raised and answered:

1. What is the relationship between socio-economic background of parents and academic performance of Automobile Mechanic Works students in Lagos and Ogun States' Technical Colleges?
2. What is the relationship between the collaborative interactions of upper, middle and lower socio-economic classes of parents' and academic performance of Automobile Mechanic Works' students in Lagos and Ogun States' Technical Colleges?

Research Hypotheses

The following hypotheses were formulated and tested at .05 level of significance:

- H₀₁:** There is no significant relationship between the upper, middle and lower socio-economic classes of parents' and academic performance of Automobile Mechanic Works' students in Lagos and Ogun States' Technical Colleges.
- H₀₂** There is no significant relationship between the collaborative interactions of upper, middle and lower socio-economic classes of parents' and academic performance of Automobile Mechanic Works' students in Lagos and Ogun States' Technical Colleges.

Methodology

The research design for this study was descriptive survey. According to Uzoagulu (2011), descriptive survey design is used to collect data that enable a systematic description of the various characteristic features of a given population. The study looked at the relationship between students' socio-economic background (SEB) and their academic performance in Automobile Mechanic Works in Lagos and Ogun States' Technical Colleges, parameters of SEB in this study were; parents' education, parents' occupation and parents' income as the independent variables while

students' academic performance was the dependent variable using questionnaire to collect data from respondents that made up the sample with a view to allowing generalization.

Population of the Study

The population for this study was 120 year three students of Automobile Mechanics Works in eight Lagos and Ogun States' Technical Colleges. The choice of students in year three were considered because these students had minimum of two years study experience in Automobile Mechanic Works and were also permitted to have more experience in this area since they were already rounding up their study. More so, respondents were given the instrument relating to parental factors to their parents at home to allow an objective and true information required on parental education, parental occupation and parental income

Sample and Sampling Techniques

The entire population of 120 Automobile Mechanic Works students in year three from Technical Colleges in Lagos and Ogun States was used as sample because of its manageable size. Azoagulu (2011) explained that the closer the sample to the population, the better the outcome data. 17 students were from Ado-Soba, 13 students were from Ikotun, 13 students were from Epe, 19 students were from Ikorodu all in Lagos State. 12 students were from Abeokuta, 16 were from Ayetoro, 13 from Ilara-Remo while 17 students were from Igbesa respectively, all in Ogun State, giving a population of 120 students for the study.

Research Instrument

The instrument used for this study was a structured questionnaire titled "Parents' Socioeconomic Background Questionnaire (PSBQ)". The questionnaire contained structured items that portray elements of parents' socio-economic background. The PSBQ sought information on items such as. parents' education, occupation, income. The PSBQ parameters were residence type, property owned by parents, conveniences provided and number of siblings among others. Points were assigned to each indicator of PSBQ. PhD and Masters' degree holding parents were awarded 5 points, BSc/HND 4 points, NCE/OND 3points, O/level/TCII, C&G intermediate 2 points while primary 6 certificate holding parents were awarded 1 point each. For parents' occupation, professionally qualified parents holding top management positions were assigned 5 points, 4 points

to parents holding mid senior (10-11) positions and equivalents, 3 points to intermediate position holders (08-09), 2 points to junior occupations (06-07) while 1 point was assigned to the lowest cadre (01-05). Classifications for parents' income were as follows; high income (grade level 12 & above) 5 points, medium income (grade level 10 & 11) 4 points while low income was (grade level 01-05) 2 points. Students' test-scores were used alongside the percentile scores to separate the three socio-economic classes of students namely; high SEB, medium SEB and low SEB respectively for analysis seeking their possible relationship with students' academic performance. Students' test-score sheets were obtained from Colleges' Academic Record Offices for data on academic performance upon permission from Principals

However, the data collected were analyzed using students' mean scores for the various socio-economic levels for research question, Multiple Regression and Analysis of Variance (ANOVA) statistical tools for research hypotheses.

Validity and Reliability of the Instrument

The questionnaire for this study was subjected to face and content validity by experts in Measurement and Evaluation from the Department of Vocational and Technical Education, Ambrose Alli University, Ekpoma to determine the validity of the question items. After screening and verification, items that were found valid were retained while those found invalid were modified, replaced or rejected.

The reliability of the instrument was determined by the use of test-retest technique. The instrument was administered on two occasions with a two-week interval to 12 Automobile Mechanic Works students in Government Technical Colleges in Awe in Oyo. The Pearson Product Moment Correlation coefficient of reliability of the two sets of scores was calculated and the score was 0.73. This was good enough for use in this study.

Method of Data Collection

The researcher administered the research instrument with the help of two research assistants. 120 copies of questionnaire were administered with the active assistance of subject teachers and all were retrieved for analysis.

Method of Data Analysis

Data obtained from PSBQ and students' test scores were used in the analysis. The

Mean scores were used for research questions while the students' test-scores and the percentile scores separated for the three categories of socio-economic background of parents; Upper, Middle and Low were analyzed using the multiple regression analysis and the analysis of variance (ANOVA) for individual relationship and collaborative interaction among the three classes of parental background.

Results Presentation

Research Question 1: What is the relationship between the socio-economic background and academic performance of Automobile Mechanic Works students in Lagos and Ogun States' Technical Colleges?

Table 2: Mean Scores for the Various Levels of Socio-economic Background

SEB Levels	(Mean scores) X	N
Upper	67.53	40
Middle	60.19	40
Low	55.15	40

Table 2 shows students' mean scores that students from upper socio-economic background achieved the highest mean score of 67.53. This is followed by students from middle socio-economic background who posted a mean score of 60.19 while students from low socio-economic background achieved the least mean score of 55.15

H₀₁: There is no significant relationship between students' socioeconomic background and their academic performance in Automobile Mechanic Works in Lagos and Ogun States' Technical Colleges.

Table 3: Regression Summary Showing the Joint Contributions of Collaborative Activities of Socio-Economic Status to Academic Performance of Automobile Mechanic Students

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Durbin-Watson
1	.318 ^a	.101	.095	5.76771	1.555

Predictors: (Constant). High Socio-Economic Status, Medium Socio-Economic Status and Low Socio-Economic Status. Evidence in Table 3 shows that the three indicators of socio-economic

status have positive multiple correlations with academic performance of automobile mechanic students ($R = 0.318$). The adjusted R^2 value of 0.095 indicated that the three indicators of socio-economic status jointly contributed 9.5% to the variance, that is, academic performance of automobile mechanic students. By implication, the remaining 90.5% was due to residuals, that is, other variables not included in the study. However, to confirm if the result of adjusted R^2 value obtained is significant, Analysis of Variance (ANOVA) was carried out and the result is presented in Table 4.

H₀₂: There is no significant relationship between the collaborative interactions of upper, middle and lower socio-economic classes of parents and academic performance of Automobile Mechanic Works students in Lagos and Ogun States' Technical Colleges.

Table 4: Relationship between the Collaborative Activities in Socio-Economic Status Indicators and Student Academic Performance

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	19.005	3	6.335	1.033	0.038 ^b
Residual	1202.350	196	6.134		
Total	1221.355	199			

a. Dependent Variable: Academic Performance

b. Predictors: (Constant), High Socio-Economic Status, Medium Socio-Economic Status and Low Socio-Economic Status

Evidence in Table 4 shows that the calculated F-value is 1.033, and it is statistically significant at $p < .05$. Hence, the independent variables statistically and significantly predict dependent variable. This means that the obtained adjusted R^2 value was not due to chance. This implies that regression model is a good fit of the data. That is, the three indicators of socio-economic status are all important in determining academic performance of automobile mechanic students.

To establish relative contributions of each of the three indicators of socio-economic status on academic performance of automobile mechanic students, their relative β -values and their corresponding p-values were established and the results are presented in Table 5.

Table 5: Relative Contributions of Socio-Economic Status Indicators and Academic Performance of Automobile Mechanic Works Students

Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Remark
	B	Std. Error	B				
(Constant)	33.761	1.574			21.455	.010	
High Socio-Economic Status	.011	.065	.013		.176	.019	Significant
Medium Socio-Economic Status	.101	.062	.121		1.640	.013	Significant
Low Socio-Economic Status	.003	.062	.004		.056	.003	Significant

a. Dependent Variable: Student academic performance

Table 5 showed that each of the three indicators of socio-economic status contributed differently to academic performance of automobile mechanic students. The relative contributions of each indicator to student academic performance in order of importance are: High Socio-Economic Status ($\beta=0.013$; $p<0.005$), Medium Socio-Economic Status ($\beta=0.121$; $p<0.05$) and Low Socio-Economic Status ($\beta=0.04$; $p>0.05$). This result means high socio-economic status contributed most to student academic performance while, low socio-economic status contributed the least.

Discussion of Results

Table 3 showed that parents' income, educational background and parents' occupation have significant joint and relative contributions in predicting academic performance of automobile mechanic students. This means that the independent variables (parents' income, educational background and parents' occupation) raised are significant in determining academic performance of automobile mechanic students.

The analyses showed that children from economic advantaged family are more likely to be equipped with relevant materials. The study also showed that children from economically stable families are more likely to perform well and better than children from low financial background. The result analyses corroborate with the study of Broody and Dowker (as cited in Odoh, Ugwuanyi & Chukwuani, 2017) which state that students who come from economically poor families due to poor parental income level are more likely to be less equipped with relevant materials and are more exposed to poor performance in school than those from more economically stable families. This finding of the study was also in line with the views of Machebe and Ifelunni (2014); Musarat, Sundus, Faqiha, Fozia, and Ayesha (2013); which showed that financial status of parents does not only affect the academic performance of students but also makes it impossible for children from low

financial background to compete well with their counterpart from high financial background under the same academic environment.

The result findings showed that children from families where parents are more educated tend to have high intellectual, economic, psychological and emotional capacities which often result to high academic performance. This finding is in line with the view of Ahmad and Naeema (2013) which state that children from families where parents have less education tend to perform systematically poor in school than pupils whose parents have more education. The opinions of Norsuhaily, Ibrahim and Mudassir (2017); Yunus, Hamzah and Razak (2018) are in line with the result of the analysis which revealed that parents who reached some certain level of education had the ability to assist children doing the assignment, know the needed books, models and maps for their children. The result of findings showed that parents' occupation can determine academic performance of automobile mechanic students. This finding is in line with the view of Michelle, and Young (2014) which states that children whose parents have better occupation score high marks than those whose parents have least occupation. Also, Faisal (2014); and Mohammed and Almatalka (2014) which reported that parental occupation is the main predictive variable influencing students' academic performance corroborates this study's finding.

Conclusion

The importance attached to parents' socioeconomic background in predicting children academic performance cannot be over emphasized. Parents with medium or high educational attainments, good and well – paying jobs are more inclined to their children's socio – academic needs. They have stable schedules, can plan ahead and assist their children academically and socially. Conversely, parents with low income and low socioeconomic statuses are likely to be incessantly disturbed; they are not likely to have a concerted roadmap for their children education. This is likely to affect their relationship with spouses and children, and by extension, children's academic performances.

Recommendations

Based on the findings of this study, the following recommendations were made:

- 1) Consistent importance should continue to be accorded parents' education as it affects students' performance in the study area.

- 2) Parents should be encouraged to maintain family responsibility-enabled income through capacity/economic development in their various occupations of endeavour in the study area.
- 3) Medium and small scale entrepreneurship should be encouraged with possible loan facilities for inclusive gainful economic activities as occupation enlargement assistance to maintain sustainable occupation.

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