## Socio-Economic Foundations of Educational Outcomes: Evidence from Nigeria

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## ABSTRACT

The paper aimed at investigating the impact of parents' socio-economic status on their children's educational outcomes in Nigeria. Primary data was used in the study. Instrument used in data collection was questionnaire. One way analysis of variance (ANOVA) was the technique employed to analyze the data. An important finding is that there is a significant impact of parents' socio-economic status on the educational outcome of children.

Key words: ANOVA, Educational Outcomes, Nigeria, School, Socio-economic Status.

## 1. INTRODUCTION

It is conventional in many countries of the world to link the status of a family with the family's income, parents' educational level, parents' occupation and social status. Many factors have been found to influence the educational outcome of children. Among them, a parents' socio-economic status plays a significant impact. In other words, a parent's social class can help explain the relative educational outcome of children.

Status is measured as a combination of education, income and occupation. Conceptually, it is the social standing or class of an individual or group. Consequently, privilege, power, and control are emphasized when the status of an individual or group is seen through the lens of society. The role of a parent's circumstances economically and socially in determining the educational outcome of their child cannot be overemphasized, as the poorer their economic and social circumstances, the more difficult it is to support a child's educational development and vice versa.

A parent's economic and social status can impact on their child's educational outcome in several ways. These include the impact on parental involvement in their child's academic activities, the ability to procure relevant educational materials, as well as the nature and type of education given to the child. Even the nature and type of institution to which the child is sent to receive education is positively correlated to parental socio-economic standing.

Many scholars hold the view that children from high and middle socio-economic status parents are better exposed to a learning environment at home because of the availability of extra learning facilities which are provided to aid the learning of their children. In addition, well-educated parents ensure their children's future earning by providing them a better education. On the other hand, because children from low socio-economic backgrounds lack access to extra learning facilities, climbing the educational ladder may be fraught with a multitude of difficulties. The implication of this is that children who come from low socio-economic status earn lower test scores and have greater tendency to drop out of school than their counterparts from high socio-economic status. One explanation given for the discrepancy between the educational outcomes between children from high and low socioeconomic status is that the latter are prevented from access to vital resources required by the students such as textbooks, qualitative schools, computers and the like. This is in addition to low socioeconomic backgrounds in which stress is created at home where parents increasingly face difficulties in meeting the financial needs of the children. Economic hardships induced by low socioeconomic status lead to parental disruptions, rising cost of family conflicts, parental depression and greater probability of single parenthood, all of which indicate the quality of home life in which the child is brought up (see Jeynes, 2002; Hockschild, 2003; Eamon, 2005).

It has been observed that children from low socioeconomic status households develop academic skills more slowly, in comparison with those from higher socioeconomic status groups. This is because initial academic skills are heavily linked with the home environment. Thus where there is low literacy connected to parents' low academic level, it negatively affects a child's pre-academic skills. Studies are in support of the view that pupils from households where parents' status is low acquire language skills more slowly as well as display delayed letter recognition and phonological awareness. Children with higher socio-economic backgrounds are more likely to be proficient on tasks of addition, subtraction, ordinal sequencing, and math word problems than children with lower socioeconomic status backgrounds.

Even the feelings associated with low socioeconomic status by students have been found to be responsible for low educational outcomes. Thus students who identify themselves as part of a lower class are associated with feelings of not belonging in school and exhibit greater probability to drop out of school before graduation. The conclusion is that that family economic stress and personal financial constraints affect emotional distress and depression in their children, negatively impacting their academic outcomes.

It is imperative to stress that some children succeed in school despite having parents whose socio-economic status is low. What is incontrovertible however is that parental involvement as captured by a parent's status which significantly influences academic choices for their children do impact the educational outcomes of their children.

This paper seeks to find out the extent to which parents' socio-economic status promote the educational outcome children. The rest of the paper has the following structure. Literature and theoretical issues are examined in section 2. Section 3 is devoted to materials and methods. Section 4 provides empirical results. The study is concluded in section 5.

# 2. LITERATURE REVIEW AND THEORETICAL ISSUES

Numerous wide-ranging reviews of the relationship between socio-economic status and educational outcomes are extant in the literature (Amato, 1987; Mukherjee, 1995; Rumberger, 1995; Jacobs & Harvey, 2005).

According to the National Center for Educational Statistics (2008), Socio-economic status is a matrix of economic and sociological measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education and occupation. In the analysis of socioeconomic status, the variables usually considered are the household income, earners' education and occupation.

Ainley et al (1995) defined socio-economic status as a person's overall social position to which attainments in both the social and economic domain exist. In the context of educational outcome, it refers to the socio-economic status of the parents or family determined by their achievements in education, employment and occupational status, income and wealth. In the view of Kenneth et al (2001), socio-economic status has been defined from a wide range of perspectives, so that no single theory has a monopoly on the meaning. According to them, it refers to the position of individuals, families, households, or other aggregates on one or more dimensions of stratification. These dimensions include income, education, prestige, wealth, or other characteristics that members of society deem outstanding.

Basically, socio-economic status is the term embracing the totality of an individual's standing in society as seen in such variables as occupation, income and education. However, there is usually ambiguity in what constitutes socio-economic status or even a class. In essence the concepts are seen on a relative basis.

# 2.2 Factors Influencing Students' Educational outcome

The factors influencing students' educational outcome are well documented. According to Barry (2005), these consist of student role performance factors, family-level factors, peer factors and school factors. In this investigation, student role performance factors, school environment, family background and peer influence are examined.

## 2.2.1 Student role performance factors

Many debates have taken place regarding the place of student role performance in the determination of students' academic outcomes. Student role performance is defined as how well an individual or student fulfils the role expected in an educational setting. Variables such as sex, race, school effort and distribution, extracurricular activities and deviance, have been found to impact student role performance (Eitle, 2005).

In the past, there was indication of wide differential in educational outcome between boys and girls, with the latter ahead of the former. In recent times however, the gap has been narrowing while girls outperform boys in certain cases (Chambers & Schreiber, 2004a; Ceballo et al, 2004). While boys usually outperform girls in science and mathematics, girls on the other hand perform better than boys in reading (Eitle, 2005). A further study found very little difference in the educational outcome between the sexes (Chambers & Schreiber, 2004a).

The academic life of a student has been shown to be influenced by race (Seyfried, 1998). Studies conducted in the United States of America indicated that non-white minority students are at a disadvantage academically and achieved below their white counterparts (Crosnoe et al, 2004). Although research showed that African-American students tend to invest less in school, leading to their relative underperformance, it is suggested however that minority students have generally come to expect discrimination through racial prejudice, believing that such negative tendencies will undermine whatever efforts they exert to prove themselves academically. This is in addition to the conclusion that lower investment in education is not a function of inability but a direct response to which minority students discrimination are subjected to in a white-dominated class (Baltle & Lewis, 2002).

School effort also plays crucial role in students' educational outcome, in terms of the energy and time put in with a view to meeting the formal academic requirements as established by a school or a teacher. Carbonaro (2005) identified three types of school effort, namely rule-oriented effort, procedural effort and intellectual effort. Rule oriented effort encompasses a student's tendency to show up in class as well as put up good behaviour in the learning process. While procedural effort entails meeting specific demands of the class such as doing and submitting a test within the prescribed time, intellectual effort involves student's critical thinking about the curriculum as well as its understanding. School effort has been demonstrated to be a good indicator of educational outcome, greater academic values and higher grade point average (Ceballo et al, 2004).

There is not yet a consensus as to whether impact of extracurricular activities the on educational outcome is positive or not. Hunt (2005) however posited that extracurricular activities have the tendency to boost educational outcome, judging from the theory advanced by Coleman in which it was stressed that extracurricular activities provide complementary role for the student, which enhances school participation, leading to improvement in grades. Miller et al (2005) stressed the role of participation in sports, which has been linked to higher student performance resulting from higher school attendance, grade point average and less disciplinary actions. Recent researches however pointed out that the participation in extracurricular activities was not the causative factor in students' greater educational outcome but that good students often take part in them, thus showing that extracurricular activities are a pointer to whether or not a student will engage in an activity.

On the part of deviance, Murdock et al (2000) linked it to academic outcomes, to the extent that poor educational outcome usually goes hand in hand with deviance, although results are not clear as to which comes first. According to Considine and Zappala (2002), low socio-economic status families are more likely to exhibit certain negative patterns in terms of educational outcomes as compared to children from high socio-economic status families. These patterns are (1) they have lower levels of literacy, numeracy and comprehension; (2) they have lower retention rates and have higher probability to drop out of school early; (3) they have lower higher education participation rates, in

that they are less likely to acquire education up to the university level in addition to exhibiting higher levels of deviant school behaviour such as truancy; (4) they □are less likely to study specialized subjects such as Mathematics and science subjects; (5) they □show greater tendency to have difficulties with their studies while displaying negative attitudes to academic life; and (6) their school-tolabour market transitions they are less successful.

## 2.2.2 School environment

The school environment encompasses the structure, composition and climate of the school, all of which set the parameters of a child's learning experience (Barry, 2005).

Two of the structural components of a school are the sector in which it operates such as whether it is private or public and class size. Crosnoe et al (2004) maintained that because of the relative better investment in private schools, coupled with smaller class sizes and better learning resources such as computers and functional laboratories and libraries, attending private schools leads to better educational outcome than public schools. Intimacy is enhanced in smaller class sizes in private schools, with the result that those who come from low socio-economic backgrounds and consequently attend poorly funded schools with large class sizes and ill-equipped structures perform less academically than their counterparts from high socio-economic backgrounds.

From the foregoing, it can be seen that the type of school a child attends can influence the child's educational outcomes. Whether a child would be sent to a good, average or low quality school would largely depend on their parents' ability to afford it. It was found that socio-economic status variables continue to influence educational attainment, even after controlling for different school types. Hence, the school context tends to affect the strength of the relationship between socio-economic status and educational outcomes (Portes & MacLeod, 1996).

Students from independent private schools are more likely to achieve higher end of school scores (Buckingham, 2000). Private schools are more likely to have a greater number of students from high socio-economic status families, select students with stronger academic abilities and have greater financial resources. It must be emphasized that the school effect is also likely to operate through variation in the quality and attitudes of teachers (Sparkes, 1999). Teachers at disadvantaged schools, for instance, often hold low expectations of their students, which compound the low expectations students and their parents may also hold (Ruge, 1998).

School climate, defined as a school's general atmosphere can help or hinder the educational outcome of students. One of the areas of school climate is interpersonal relationship between teachers and students. Educational outcome is enhanced in an atmosphere of safety and security while better results are achieved in a school where students are more motivated due to the trust they have in their teachers (Crosnoe et al, 2004).

## 2.2.3 Family background

Majoribanks (1966) observed that the home, being an important agent of socialization is instrumental in the interest that a child forms in school, in addition to the child's future aspirations. Family background encompasses factors such as socio-economic status of parents, family size, neighbourhood, maternal characteristics, one-parent versus two-parent households and divorce. Rumberger (1995) maintained that a student's family background is widely recognized as the most significant important contributor to success in schools. Jacobs and Harvey (2005) established that many variables in the family background have strong direct and indirect associations with students' success throughout school up to occupational attainment. Such variables include family structure, parent education level, parental involvement and parenting style. Studies such as those conducted by Goode (2012), Marmot (2004) and Werner et al 2007) showed that low income and little education are strong predictors of both physical and mental health problems which the child may resultantly suffer

On the part of single-parent and two-parent households, research has shown that children from the latter generally perform better academically than those from the latter. Majoribanks (1996) asserted

that single-parents do not encourage their children as much as two-parents, in addition to having lower expectations of their children. Single-parents also struggle for time due to the fact that they are often time-pressed to balance all areas of their lives, a condition not often suffered in the same magnitude by two-parents because in their households, efforts are geared towards complementing each other. Single-parents tend to have less income, a situation that increases home stress and conflicts, as against the households where there are two-parents whose combined incomes, mutual support and timemanagement generally lead to their children performing better in academics than those from low socio-economic backgrounds. According to Evans (2004), children with lower income have less stable families, greater exposure to environmental toxins and violence, and more limited extra-familial social support networks. His studies found that low socioeconomic status children are less cognitively stimulated than high socio-economic status children because they do less reading and being read to less by their parents.

Closely related to the level of income at the disposal of parents is the size of the family which has been found to influence children's educational outcome. According to Eamon (2005), children with fewer siblings tend to have more attention from their parents and greater access to resources than those with more siblings or larger family.

Jeynes (2002) found that divorce can help explain the relative educational outcome of children. Divorce negatively affects educational outcome, so that students from homes where parents had divorced were among those with the lowest scores in standardized tests. The explanation for this is that divorce is capable of causing the socioeconomic status of a family to decrease, while at the same time hurting parental bond and connections.

The case of maternal characteristics is instructive. According to Baharudin and Luster (1998), the educational status of a mother determines the educational outcome of her children. Mothers who are more educated have higher selfesteem which results in their having children having higher test scores. There is usually either a positive or negative correlation between children's educational outcome and the time at which a mother decides to start bearing children. When childbearing is delayed, it was found that mothers who did so provided more learning-stimulating environments which positively impacted their children's educational outcome. In a study conducted by Kohl et al (2000) maternal depression was explored and found to be a risk factor because of its association with a general lack of motivation, energy and confidence, with the result that people who are depressed elicit negative responses from others.

The neighbourhood in which a child is raised influences their educational outcome and achievement (Eamon, 2005). Children from poor neighbourhoods perform less than those from rich neighbourhoods. The reason for this is that rich neighbourhoods often have positive role models, good schools and educational facilities, in addition to creating healthy social networks, all of which act as motivation to the children, leading to their better educational outcome.

## 2.2.4 Peer influence

Peer group is an important agent of socialization, so that the level of participation or involvement by a child can tell on their academic outcomes in school. Santor et al (2000) agreed that due to peer group being a vital part of a child's developmental process, peer pressure and conformity can undermine a child's educational outcome.

Peer pressure is described as the tendency by other members of a group to influence the child to participate in certain activities, while peer conformity is defined as the extent to which an individual adopts actions that are sanctioned by their peer group. Both behaviours have been found to contribute negatively to the child's educational outcome because they tend to increase the probability of engaging in risk-taking behaviours such as prostitution, gambling and drug abuse.

## 2.4 Individual Characteristics Leading To High Educational Outcome

Several studies have linked high educational outcome to factors not related to high socioeconomic status. In other words, irrespective of the impact of socio-economic status, some students are still successful academically, even outperforming those from high socio-economic backgrounds. Many researchers regard this as individual characteristics. Two of these characteristics are resilience and academic emphasis. Resilience has been found to enhance higher educational outcome among students of a low socio-economic status background. Floyd (1996) noted that there are students who succeed despite economic hardships in their respective families and who still managed to focus on and excelled in their education.

Borman and Overman (2004) developed four measures of individual characteristics in their study of academic resilience in Mathematics among poor and minority students. These measures are self-esteem, students' efficacy, student engagement, and students' overall disposition towards school. It was found that the four measures favoured resilient children. This study supported the one carried out earlier by Wang et al (1994), in which high selfesteem, high self-efficacy and autonomy were identified as individual characteristics of resilient children, which enabled them to succeed academically despite their coming from low socioeconomic backgrounds. According to Borman and Overman (2004), resilient children have strong interpersonal skills, maintain healthy expectations and have a high level of activity, characteristics that underscore the children's underlying perseverance, strong will and positive disposition.

Hoy et al (1991) posited that academic emphasis is the single best organizational climate predictor of student achievement is. It was found that high schools with an orderly and serious learning environment, having teachers that set high but achievable goals, and in which students work hard and have respect for others, have higher levels of student achievement, even in the midst of controlled data for socio-economic status. This is consistent with the finding of Floyd (1996) which showed that teachers who bridge the gap between home and school and are sensitive to and knowledgeable of their students' cultural and community heritage provide better learning environments, particularly for students from low socio-economic backgrounds.

### 3. MATERIALS AND METHODS

## 3.1 Research Design

A research design is referred to as the blueprint or scheme for the specific structure and strategy in the investigation of the relationship between the variables identified in an investigation to enable the researcher collect data. The paper is on the impact of parents' socio-economic status on students' educational outcome in Nigeria.

The study utilized a mixed methodology (quantitative and qualitative) aimed at understanding as well as interpreting the factors that influence students' educational outcome of students at the secondary level and who come from different socio-economic status in Nigeria. The sample survey research design was adopted for generating primary data. Questionnaires were the main sources through which data was gathered. The data was collected from the selected samples of three senior secondary schools. For the present investigation, 40 of the students from each of the senior secondary school classes (i.e. senior secondary I, II and III respectively) were randomly selected. Thus 120 students were covered in the investigation.

## 3.2 Population

The population of the study was all the secondary schools in Kano State, Nigeria. There are over a thousand secondary schools in Kano State. Because of this, a sample of 3 senior secondary schools in Nassarawa local government area was drawn.

## 3.3 Sample and Sampling Technique

The data for the study was collected from Nassarawa Local Government Area of Kano State. It is one of the cosmopolitan parts of the ancient city of Kano, Nigeria. 3 senior secondary schools were selected in the local government area. In the selection of schools, the table of random numbers was used, after having listed the schools alphabetically. The sample consisted of 120 respondents, made up of 40 students from each of the 3 selected schools.

Simple random sampling technique was utilized in selecting the sample from the above target population. Students were numbered serially according to how they appeared in the class register. The starting point was picked arbitrarily until an adequate selection of a representative sample was achieved. The aim of this procedure was to ensure that all the categories of respondents in terms of parental socio-economic status were adequately represented. A parent of each sample student was actively involved in terms of providing information in part 'C' of the questionnaire.

### **3.4** Instruments for Data Collection

The instrument used in collecting data was questionnaire. questionnaires 120 were administered, consisting of 40 questionnaires to students from each of the 3 selected senior secondary schools. It was made up of three parts. Part 'A' of the questionnaire requested the students' personal background data. Part 'B' of the instrument was used to elicit information on the respondents' educational outcome. Part 'C' of the instrument measured the respondents' parental socio-economic status. The questionnaire contained a mix of close- and open-ended multiple-choice questions.

The terminal examination results were used for exploring and indicating the educational outcome of the sample students. The data for the student performance was generated from the students' individual schools. Demographic information collected includes gender, age, and parents' occupation. Parents' socio-economic status consisted of parents' level of education, income level and occupation.

## 3.5 Data Analysis Technique

To establish if parental socio-economic status has any significant influence on the educational outcome of their children, the mean score and standard deviation of all the responses were computed. The students were categorized under high parental socio-economic status, middle parental socioeconomic status, and low parental socioeconomic. Consequently, one way analysis of variance (ANOVA) was used to analyze the data. The hypothesis was tested at the 5 percent level of significance.

### 3.6 Data Presentation

In presenting and discussing the data collected from responses to questionnaires, tables and percentages were used. Issues to further confirm findings, reinforce conclusions and assist in the recommendations was also presented in tables and percentages from the various responses to questionnaires administered. The choice of data presentation method was informed by its simplicity and greater rate of understanding by prospective users.

## 4. **RESULTS AND DISCUSSION**

## 4.1 Testing of Hypotheses

Using the one way analysis of variance (ANOVA), the following hypothesis is tested.

 $H_0$ : There is no significant difference in the educational outcome of students with respect to the level of their parental status.

H<sub>1</sub>: There is significant difference in the educational outcome of students with respect to the level of their parental status.

To establish if parental socio-economic status has any significant influence on the educational outcome of their children, the students' family backgrounds were categorized under high, average and low socio-economic status respectively, as shown in Table 1.

 Table 1: Students' Family Background

Parental socio-economic	Number of students
status	
High	36
Middle	44
Low	40
Total	120

Source: Compiled from returned questionnaires

From Table 1, it can be seen that out of 120 students to whom questionnaires were distributed, 36 (representing 30%), 44 (representing 37%), and 40 (representing 33%) were from high, middle and low socioeconomic background respectively.

## Table 2: One Way Analysis Of Variance of the Impact of Parental Socio-Economic Status on Students' Educational outcome

Sources of variation	Sum of squares	DF	MS	F ratio	F critical
Between group	7271	2	145.82		
Within group	445937	117	43.68	3.36	3.07
Total	453208				

Source: Computed from returned questionnaires

With level of Significance at 5%, the value of F from the table with  $V_I = 2$  and  $V_2 = 117$  degree of freedom is 3.07. It is usual to accept the null hypothesis and reject the alternative hypothesis if the calculated F is less than the critical F.

From the computation, F is 3.36 (see appendix A). The critical F is 3.07. Therefore the alternative hypothesis is accepted which states that "There is a significant difference in the educational outcome of students with respect to the level of their parental status".

The result showed that there is a significant impact of parental socio-economic status on students' educational outcome. The finding is consistent with those of Rumberger (1995), Considine and Zappala (2002) and Hockschild (2003), among other studies.

### 4.2 Discussion of Results

### **Table 3: Students' Subject Areas**

Subject area	Number of students	%
Arts	38	32
Sciences	21	18
Social sciences	51	42
Commercial	10	8
Total	120	100

Source: Compiled from returned questionnaires

From Table 3, 32% of the students surveyed offer arts subjects, 18% offer sciences, while for social sciences and commercial subjects the figures are 42% and 8%. The figure for commercial subjects is particularly low because of the non-availability of teachers in subjects like commerce and principles of accounts in many senior secondary schools. The number of students who offer social science subjects is the highest. This is partly due to the predominance of teachers in that area.

#### Table 4 Factors Responsible for Educational outcome

Factors	Number of students	%
Parents' socio-economic	82	68
status		
School environment	68	57
Peer Influence	24	20
Resilience	56	47

Source: Compiled from returned questionnaires

Table 4 indicates that majority of the students (68%) agree that of the many factors responsible for educational outcome, parental socio-economic status ranks the highest. This was closely followed by resilience (47%), school environment (57%) and peer influence (20%). The finding is consistent with those of Crosnoe et al (2004), Portes and MacLeod, 1996), Majoribanks (1966) and Eamon (2005).

### Table 5: School Environment as a Determinant of Students' Educational outcome

Response	Number of students	%
Strongly Agreed	68	57
Agreed	29	24
Disagreed	16	13
Strongly Disagreed	7	6
Total	120	100

Source: Compiled from returned questionnaires

From Table 5, 57% of the students strongly agree that school environment is a determinant of educational outcome. The number of students who agree that school environment plays significant role in students' educational outcome is 29, representing 24%. 16 students representing 13% and 7 students representing 6% disagree and strongly disagree respectively that school environment was a significant factor explaining the educational outcome of students. This finding is consistent with those of Sparkes (1999) and Buckingham (2000).

### **Table 6: Participation in Extracurricular Activities**

Response	Number of students	%
Yes	83	69
No	37	31
Total	120	100

Source: Compiled from returned questionnaires

Table 6 shows that 69% of the students agree that participation in extracurricular activities is a factor that determines the educational outcome of students. 37 students, representing 31% of the students disagree that

participation in extracurricular activities is a factor responsible for the educational outcome of students. The finding is consistent with those of Hunt (2005) and Miller et al (2005).

### Table 7: Nature of Student's Household

Nature of household	Number of students	%
Single-parent	22	18
Two-parent	98	82
Total	120	100

Source: Compiled from returned questionnaires

From Table 7, it can be seen that of the 120 students surveyed, 22 (representing 18%) come from single parent household, while the number of students from two-parent household is 98, representing 82%. Students from two-parent household had higher mean scores and thus better educational outcome than those from single parents. This finding is consistent with the results of the studies conducted by Majoribanks (1996), Eamon (2005) and Kohl et al (2000).

### **Table 8: Problems Militating Against High Educational outcome**

58
73
45
30
32

Source: Compiled from returned questionnaires

From Table 8, 70 (representing 58%) consider low socio-economic status of parent as a problem militating against high educational outcome. 88 students (representing 73%) consider poor teacher quality as militating against high educational outcome. 54 students (representing 45%), 36 students (representing 30%) and 38 students (representing 32%) consider poor teacher quality as militating against high educational outcome.

 Table 9: Ways of Solving Problems Militating against High Educational outcome

Parental socio-economic	Number of students	%
status		
Improvement in parents'	62	52
socio-economic conditions		
Enhancement in teacher	55	46
quality		
Development of realistic	28	23
curriculum		
Reorientation in value	71	59
system		

Source: Compiled from returned questionnaires

Table 9 indicates that 52% consider improvement in parents' socio-economic conditions as a way of solving the problems militating against high educational outcome. 46% agree that enhancing teacher quality is imperative, while 23% considered the development of a realistic curriculum as a venue that can be explored to solve the problems militating against high educational outcome. 59% of the students think that reorientation in value system will go a long way in improving educational outcome of students.

## 5. CONCLUSION

The paper aimed at investigating the impact of parental socio-economic status on children's educational outcome. Status is measured as a combination of education, income and occupation, and relates to the class of an individual or group. The role of a parent's circumstances economically and socially in determining the educational outcome of their children is generally acknowledged in the literature.

The following is a summary of the major findings:

- (i) There is significant difference in the educational outcome of students with respect to the level of their parental status.
- (ii) Parents' socio-economic status contributes significantly to the educational outcome of their children.
- (iii) Factors explaining the relative differences in the educational outcome of students, apart from the socio-economic status of their parents are teacher quality, school sector, nature and content of curriculum used in school, the wider societal value system and individual resilience.

Based on the findings, the following are recommended:

- There should be improvement in parents' socio-economic conditions, through government intervention in terms of greater access to resources by way of employment opportunities and greater value for money via stable macroeconomic policies.
- (ii) Teacher quality should be given priority through training and retraining by government across all tiers of the educational system.
- (iii) The school environment under which students learn should be made more learning-friendly, in terms of provision of learning aids such as functional libraries and accessibility to the internet.
- (iv) There should be improvement in school climate, to foster greater interpersonal relationship between teachers and students, in addition to enhanced atmosphere of safety and security.
- (v) Realistic curriculum should be developed that takes into account the dynamics of the world and the peculiarity of local environment.

(vi) There should be societal reorientation, as a way of rejuvenating shared and time-tested values of hard work, competence and honesty.

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#### APPENDIX A COMPUTATION OF F STATISTIC

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S/No.	High X1	(X1)2	Middle X2	(X2)2	Low X3	(X3)2
1	73	5329	61	3721	62	3844
2	67	4489	56	3136	58	3364
3	68	4624	56	3136	71	5041

4	57	3249	54	2916	65	4225
5	65	4225	55	3025	69	4761
6	67	4489	59	3481	55	3025
7	71	5041	65	4225	69	4761
8	69	4761	71	5041	54	2916
9	70	4900	54	2916	57	3249
10	58	3364	70	4900	51	2601
11	61	3721	73	5329	68	4624
12	58	3364	59	3481	64	4096
13	71	5041	69	4761	66	4356
14	67	4489	58	3364	54	2916
15	58	3364	55	3025	50	2500
16	51	2601	65	4225	55	3025
17	71	5041	65	4225	60	3600
18	61	3721	65	4225	68	4624
19	59	3481	54	2916	64	4096
20	57	3249	60	3600	57	3249
21	48	2304	63	3969	59	3481
22	55	3025	61	3721	50	2500
23	64	4096	53	2809	55	3025
24	55	3025	72	5184	54	2916
25	58	3364	53	2809	68	4624
26	73	5329	60	3600	53	2809
27	58	3364	57	3249	49	2401
28	55	3025	64	4096	51	2601
29	68	4624	55	3025	61	3721
30	73	5329	60	3600	54	2916
31	50	2500	61	3721	50	2500
32	61	3721	51	2601	64	4096
33	54	2916	63	3969	61	3721
34	64	4096	55	3025	53	2809
35	61	3721	69	4761	62	3844
36	53	2809	57	3249	61	3721
37			65	4225	52	2704
38			62	3844	53	2809
39			67	4489	52	2704
40			65	4225	57	3249
41			69	4761		
42			55	3025		
43			74	5476		
44			71	5041		
$\sum X$	2229		2706		2336	

$\sum X2$		139791		168122		138024
n	36		44		40	

 $X_1, X_2$  and  $X_3$  represent the mean scores of students from High, Middle and Low socio-economic class (backgrounds) respectively.

The F statistic is given by,

$$F = \frac{MS_b}{MS_w}$$

Where  $MS_b = SS_b/df$  (df = k - 1) and  $MS_w = SS_W/df$  (df = N - k)

$$SS_{b} = \frac{(\Sigma X_{1})^{2}}{n_{1}} + \frac{(\Sigma X_{2})^{2}}{n_{2}} + \frac{(\Sigma X_{3})^{2}}{n_{3}} - \frac{({}^{n}\Sigma X_{k})^{2}}{N}$$

$$SS_{w} = \frac{(\Sigma X_{1})^{2}}{n_{1}} - \frac{\Sigma (X_{1})^{2}}{n_{1}} + \frac{(\Sigma X_{2})^{2}}{n_{2}} - \frac{\Sigma (X_{2})^{2}}{n_{2}} + \frac{(\Sigma X_{3})^{2}}{n_{3}} - \frac{\Sigma (X_{3})^{2}}{n_{3}}$$

$$[\Sigma \Sigma X^{2}]_{b} = \Sigma X_{1} + \Sigma X_{2} + \Sigma X_{3} = 2229 + 2706 + 2336 = 7271$$

$$[\Sigma \Sigma (X^{2})]_{w} = \Sigma (X_{1})^{2} + \Sigma (X_{2})^{2} + \Sigma (X_{3})^{2} = 139791 + 168122 + 138024 = 445937$$

 $SS_b = \frac{(2229)^2}{36} + \frac{(2706)^2}{44} + \frac{(2336)^2}{40} - \frac{(7271)^2}{120}$ = 138012.25 + 166419 + 136422.40 - 440562.01

Degree of freedom is 3 - 1 = 2

$$MS_b = \frac{291.64}{2} = 145.82$$

 $SS_w = 139791 - 138012.25 + 168122 - 166419 + 138024 - 136422.40 = 5083.35$ 

Degree of freedom is N - K = 120 - 3 = 117

$$MS_b = \frac{5083.35}{117} = 43.45$$

$$\therefore F = \frac{MS_b}{MS_w} = \frac{145.82}{43.45} = 3.36$$

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