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# A Study of Secondary School Students' Academic Performance at the Senior School Certificate Examinations and Implications for Educational Planning and Policy in 

 Nigeria(Pp. 314-333)

Adepoju, T. L. - Dept. of Educational Administration and Planning, Obafemi Awolowo University, Ile-Ife, Osun State - Nigeria Mobile: +2348062952955
E-mail: adepojutaiwo2004@yahoo.com; adepojutl@ oauife.edu.org

Oluchukwu, E. E. - National Institute for Educational Planning and Administration (NIEPA), Ondo, Ondo State, Nigeria E-mail: ephi_2003@yahoo.com


#### Abstract

This study assessed and investigated the academic performance of secondary school students in two principal subjects (English Language and Mathematics) at the Senior School Certificate Examinations (SSCE) in ten secondary schools typical of urban and rural locations in five randomised Local Government Areas of Oyo State, Nigeria between 2005 and 2007. The study employed a descriptive survey research design. An instrument titled: Students' Academic Performance in English Language and Mathematics Questionnaire (SAPEMQ) was used to collect relevant data for the study. The ten secondary schools involved were selected based on simple random


sampling technique and the statistical tools employed to analyse the data collected were percentages, means scores and multiple regression (backward procedure). Four research questions and one null hypotheses were formulated to guide the study. The result among other things revealed that, there was a marked difference in the performance of students in urban and rural schools at the SSCE with impressive means scores obtained in urban schools (Urban $=69.8,54.4$ and 60.2 in 2005, 2006 and 2007 respectively; Rural $=36.4,24.9$ and 23.8 in 2005, 2006 and 2007 respectively). The implications of the findings for educational planning and policy in Nigeria were discussed.

Keywords: Secondary School Students; Academic Performance; School Certificate Examinations; Educational Planning; Educational Policy

## Introduction

In Oyo State, education remains the largest industry and government continues to ensure that funds, instructional material and teaching personnel are made available for the sector. Government has also continuously encouraged secondary education by adopting the social demand approach towards planning the sector and by subsidizing the Senior School Certificate Examinations (SSCE) fee in the State over a long period of time. An indication of government interest in the general education in the state is reflected in the 2008, 2009, 2010 and 2011 budgetary estimates of the State.

Of course, despite the efforts being made towards ensuring that citizens have equal educational opportunities as well as making other training facilities readily accessible to the users so as to improve students' academic performance in both internal and external examinations, it has been observed by Ajayi (1998), Adepoju (2002), and Owoeye (2000) that all is not well with the system as a result of the poor performance of students recorded in public examinations in the recent years.

The persistent poor performance of secondary school students in public examinations such as the Senior School Certificate Examinations (SSCE) in Oyo State, Nigeria in the recent times has made the development of secondary education in the State a difficult task. Parents, guardians and other stakeholders in education industry have variously commented on the performances of secondary school students particularly in English Language and Mathematics (Adepoju, 2002).

Researchers and stakeholders in education industry have in the recent past identified several factors as the causes of poor performance of students in public examinations. Among such factors identified are poor location of the school, incessant changes in government policies, closure of schools, which is contingent upon teachers' strike action, home-school distance, high student teacher ratio, lack of supervision, monitoring and evaluation machinery, lack of good textbooks, poor content and context of instruction, poor and non conductive environment among others (see Adepoju, 1995; 1998; 2002; 2003; Adeboyeje, Olaniyi and Adepoju, 2003).
In an attempt to ensure that their children perform better in the SSCE and consequently, gain admission to universities of their choice, some parents and guardians have made a particular choice of the type of secondary school they want for their children not minding the location and the cost implication of the school chosen.

However, the distribution of secondary schools in both urban and rural area (urban - rural dichotomy) has serious implication on the private cost and academic performance of the students. For instance, secondary schools should be planned such that students living in all parts of a state can have cheap means of transport and easy access to them. In order to reduce the private cost, school size has to be related to students' potential population within different communities or zones. The provision of nearby schools will undoubtedly help to increase enrolment rate and thus bridge the gap of educational disparities within the State.

The importance of English Language and Mathematics as pre-requisite subjects to gain admission into higher institutions of learning in Nigeria and some West African Countries such as Ghana, The Gambia, Sierra Leone and Liberia (These countries have the same colonial origin and jointly established the WAEC) has made the two subjects compulsory or mandatory to be passed at credit level by secondary schools students in public examinations. A credit level in either of the subjects has been used as one of the criteria for measuring and establishing the brilliancy of a particular candidate in the Nigerian context. Of course, the poor performance of secondary school students in SSCE in English Language and Mathematics had made it difficult for majority of students to gain admission into higher institutions of learning in recent times. For instance, Obemeata (1995) as cited by Adepoju (2002) found that about $93 \%$ of secondary school leavers in any given year fail to qualify for university education. He reported further that $7.7 \%$ had credit in

English Language in 1988, $9.0 \%$ in 1989 and $6.3 \%$ in 1990. In respect to Mathematics, the increasing decline in students’ academic performance was more pronounced.

Many state governments in Nigeria have made several attempts to make it a policy not to have more than 30 students per class in public secondary schools with a view to improving the performance of students in public examinations. The main thrust of this study therefore, was to establish the trend of students' performance in English Language and Mathematics at the SSCE in typical urban and rural secondary schools in Oyo State, Nigeria. It also sought to find out the percentage of those students who obtained grades from A1 - E8 as well as A1 - C6 with a view to providing relevant data for educational planners, educational policy makers and curriculum planners on the strengths and weaknesses of students' performance in the two subject areas in typical urban and rural schools.

## Research questions

Based on the background of the study, the following research questions were raised to pilot the study;
(1) What are the trends of students' performance in English Language and Mathematics at the SSCE from 2005 to 2007?
(2) Is there any difference in the means (x) percentage of students' performance at the SSCE in English Language and Mathematics from 2005 to 2007 ?
(3) What is the difference (if any) in the means (x) percentage of students' performance in the typical urban and rural locations from 2005 to 2007 ?
(4) Is there any difference in the mean (x) percentage of student's performance at the SSCE in English Language and Mathematics when grouped into the typical locations from 2005 to 2007 ?

## Hypothesis

One null hypothesis was formulated and tested in the study;
$\mathrm{HO}_{1}$ : There are no significant composite and relative correlations between government polities / positions and academic performance of secondary school students at the SSCE between 2005-2007.

## Methodology

An ex-post fact research design was adopted for the study. The population of the study comprised all the SS3 students that sat for the SSCE from 2005 to 2007 as well as their teachers in secondary schools in Oyo State, Nigeria. The sample of the study consisted of six Local Government Areas drawn from the six educational and administrative zones to which the State was divided into by the State Teaching Services Commission (TESCOM) and the Ministry of Education for administrative convenience. The six Local Government Areas ( 3 urban - based, 3 rural - based) where the schools were selected were randomly selected. This represents $18.2 \%$ of the total number of LGAs in the State. The ten secondary schools involved were selected from each zone based on probability proportional to size (PPS) sampling method as used by Adepoju (2002). From each of the secondary schools, a simple random sampling method was employed to select six (English Language and Mathematics) teachers who have not less than five years of teaching experience and have been in the schools under-study for not less than three years (2005-2007). Altogether, a total number of 72 (36 English Language and 36 Mathematics) teachers were involved.

Two instruments were developed by the researchers for the study. They are 'Students Academic Performance in English Language and Mathematics Questionnaire (SAPEMQ)'. The instrument was used to elicit information on the performance of students in English Language and Mathematics at the SSCE in the sampled schools from 2005-2007 and 'Government Policies and Students' Academic Performance Questionnaire (GPSAPQ)' which was administered on the teachers to elicit information on various government policies and the implications on the performance of secondary school students at SSCE. The instruments were supported with available records of students' performance at the SSCE in English and Mathematics in the schools under-study, Ministry of Education, PRS unit and the WAEC Zonal office, Ijokodo, Ibadan. The entire questionnaires administered on the teachers were returned. This represents $100 \%$ return rate. Data collected were analysed using both descriptive and inferential statistics. The level of significance chosen for this study is 0.05 (5\%) probability level.

The reliability of the instruments was also ascertained using a test-retest method. The reliability coefficient of 0.972 and 0.928 were obtained respectively for the instruments using Pearson - product-moment correlation coefficient in a pilot study conducted in two secondary schools.

## Results and findings

Question 1: What are the trends of students' performance in English Language and Mathematics at the SSCE from 2005 to 2007?

Tables I, II and III showed the computed percentages of passes and failure obtained at the SSCE in English Language and Mathematics in ten secondary schools (5 urban and 5 rural) in the six local government areas of Oyo State. Of importance to note in the result presented in the three Tables are variations recorded in the schools and in the two subjects (English Language and Mathematics) examined.

Research question 2: Is there any difference in the mean (x) percentage of students' performance at the SSCE in English Language and Mathematics from 2005 to 2007 ?

Table IV shows the means (x) percentage of student's general performance in English Language and Mathematics from 2005 to 2007. The result reveals an enhanced performance in Mathematics over English Language during the period under consideration.

Research question 3: What is the difference (if any) in the means percentage of students' general performance in the typical urban and rural locations from 2005 to 2007 ?

The result in Table V shows that the mean (x) percentages recorded in urban secondary schools in respect of the general performance were higher than those recorded in rural secondary schools throughout the period under consideration.

Research question 4: Is there any difference in the mean (x) percentage of students' performance at SSCE in English Language and Mathematics when grouped into the typical locations from 2005 to 2007 ?

From the result presented in Table VI, the students' performances in English Language and Mathematics in 2005, 2006, 2007 respectively in urban secondary schools were higher than the performances in rural secondary schools. This result is in agreement with the general picture as shown in Table5 above. Of importance to note in the above result is that, the mean percentages recorded in urban schools were above $50 \%$ whereas, in rural secondary schools, the mean percentages recorded were less than $40 \%$. Also, from the result, the obtained mean percentages for Mathematics in both urban
and rural secondary schools were greater and more pronounced than what were obtained for English Language.

Hypothesis one: There are no significant composite and relative correlation among government policies / positions and academic performance of secondary school students at the SSCE from 2005 to 2007

The assumed correlation among government policies / positions and students' performance may be functionally expressed in the equation below:

$$
\mathrm{SP}=\mathrm{f}\left(\mathrm{X}_{1}, \mathrm{X}_{2}, \mathrm{X}_{3}, \mathrm{X}_{4}, \mathrm{X}_{5}, \mathrm{X}_{6}, \mathrm{X}_{7}\right)
$$

Or
SP $=\mathrm{f}\left(\mathrm{X}_{1} \ldots \mathrm{Xn}\right)$
Where:
SP $\quad=$ Students' academic performance $=$ Dependent variable
$\mathrm{X}_{1}=$ Mass promotion of students from one grade / level to another
$\mathrm{X}_{2} \quad=$ Free education programme
$\mathrm{X}_{3} \quad=\quad$ Use
$\mathrm{X}_{4}=$ Mass transfer of teachers
$\mathrm{X}_{5}=$ Incessant change in educational policy
$\mathrm{X}_{6} \quad=$ Locations of schools
$\mathrm{X}_{7}=$ Low expenditure on education
$\mathrm{X}_{1} \ldots \mathrm{X}_{7}=$ Predictor variables (independent variables)
$\mathrm{f} \quad=$ Functional notation
From Table VII, the contributions of all the independent variables to academic performance of students have a multiple correlation of 0.74747 . The combination of these variables explained $55.8 \%$ of the variance in academic performance of secondary school students as revealed by the coefficient of determination, $\mathrm{R}^{2}(0.55871)$.

Table VIII shows the analysis of variance of the effects of the independent variables (predictor variables) on the dependent variable.

## Discussion of findings

The analysis of percentages of passes and failures in Tables I and II revealed the trend in students' performance in English Language and Mathematics at the SSCE from 2005 to 2007. The general picture of the analysis of performance in English and Mathematics in both urban and rural secondary schools shows that there was improved performance in urban secondary schools in both English Language and Mathematics over that of the rural secondary schools. Of course, the percentage of failure was very much pronounced in Mathematics in rural secondary schools from 2005 to 2007 while percentage of passes was more pronounced in Mathematics than in the English Language in 2005, 2006 and 2007 respectively. For instance, in English Language, two schools (G and J) recorded 50\% and 55.6\% in 2005 and 2006 respectively however, only school ' $J$ ' recorded above $50 \%$ while the same school 'J' recorded $54.2 \%$ in 2007. In Mathematics, school ' J ' only recorded $84.8 \%$, in 2006, schools ' F ' and ' J ' recorded $60.3 \%$ and $76.3 \%$ respectively. None of the schools obtained up to $50 \%$ in 2007 ; whereas, all the schools recorded $63.9 \%, 51.6 \%, 93.1 \%$ and $62.5 \%$ failure in Mathematics in the same year. In English Language, the schools obtained $73.2 \%$, $50.0 \%$, $94.0 \%, 74.4 \%$ and $44.4 \%$ failures in 2005 respectively. In 2006, the following percentages of failure were obtained by the schools in rural area in English Language, $69.5 \%, 98.5 \%, 94.9 \%, 100.0 \%$ and $43.4 \%$. In 2007, the schools obtained $77.8 \%, 76.8 \%, 96.7 \%, 100.0 \%$ and $45.8 \%$ failures in the English Language respectively. In all, students' performance in Mathematics was very much higher than in English Language. School 'J' from the findings seemed to be the most efficient school in relation to students' performance.

In the case of the urban schools, the performance in Mathematics was relatively better than that of English Language except in 2006. The performance in both English Language and Mathematics were the least when compared with what were obtained in 2005 and 2007 respectively (see Table VI). Also, the percentage of failure as recorded in urban schools was considerably lower that what was obtained in rural schools.

Table III shows the trend of percentage of passes of students' performance in English Language and Mathematics at SSCE in all the ten secondary schools (urban and rural) under-study. The percentages as shown in Table III indicated only those who obtained the required grades (Al-C6) for university admission. Comparing the percentage passes in Table III with the analysis in Tables I and II revealed that higher percentage of students obtained between P7 and E8 in English Language and Mathematics.

By the picture presented in Table III, none of the ten schools attained up to 40 \% success (Al-C6) in English Language and Mathematics at the SSCE from 2005 to 2007 except school 'C' which obtained $42.1 \%$ in Mathematics in 2007. The result as shown in Table III indicated general poor performance in the subject areas over the years. Comparing the result obtained in 2005, 2006 and 2007, the percentage passes recorded in Mathematics in 2006 and 2007 were higher than what were obtained in English Language. In 2005, the percentage passes (Al-C6) in English Language (17.31) were higher than that of Mathematics (14.68).

The discussions of the result presented in Tables I, II and III answer the research question on the trend of students' performance in English Language and Mathematics at the SSCE from 2005 to 2007.

Table IV confirms the result obtained in Tables I, II and III. In Table IV, the mean (x) percentage of students' performance in English Language and Mathematics were shown. The result revealed an enhanced performance in Mathematics over English Language during the period under consideration. From the analysis in Table IV, the general performance in both subject areas was very low in 2006. When compared with other years (2005 and 2006), the mean (x) percentage of students' performance in 2006 was the least. Except in Mathematics (2005), the mean (x) percentage obtained in 2005, 2006 and 2007 were not up to $50 \%$.

The analysis of result shown in Table $V$ revealed that the mean (x) percentages of students' performance in urban schools by all indications, are greater than what obtained in rural schools throughout the period.. For instance, in urban schools the following mean (x) percentages were obtained in 2005,2006 and 2007 respectively, $69.8 \%, 54.4 \%$ and $60.2 \%$. Whereas, in rural schools, $36.4 \%, 24.9 \%$ and $23.8 \%$ mean (x) percentages were obtained. This finding corroborates the previous findings (Obe 1984; Obemeata 1995; Ajayi, 1998; Benjamin,1998; Owoeye, 2000; Ayodele,2000 and Adepoju, 2002) that students do perform better in urban schools than their counterparts in rural schools. This finding however contradicts the findings of Axtell and Bowers (1972) and Ajayi and Ogunyemi (1990) that students in rural schools performed significantly better than the students in urban schools.

From the regressional equations in Tables VII, VIII, and IX, the extent to which the independent variables $\left(\mathrm{X}_{1}, \mathrm{X}_{2}, \mathrm{X}_{3}, \mathrm{X}_{4}, \mathrm{X}_{5}, \mathrm{X}_{6}\right.$, and $\left.\mathrm{X}_{7}\right)$ predict or contribute to academic performance of students was shown. As revealed in the regression Tables, academic performance of students was regressed with
variables grouped under government policies / positions. The result shows (see Table VII) that the variables jointly accounted for $55.87 \%$ of the variance in academic performance of students in both subjects (English Language and Mathematics). The $\mathrm{R}^{2}$ (0.55872) and F-ratio (19.57496) indicated that the explanatory variables as a group provided a significant explanation of academic performance of students indicating that the R -value obtained was not due to chance. The results also showed from Table IX that with $30.5 \%$ contribution, location of school $\left(\mathrm{X}_{6}\right)$ was found to be the most important predictor variable of the explained variance in academic performance. This was followed by expenditure on education $\left(\mathrm{X}_{7}\right)$, mass promotion of students from one grade /level to another $\left(X_{1}\right)$ and free education programme $\left(\mathrm{X}_{2}\right)$ with $23.1 \%, 23.0 \%$ and $13.2 \%$ contributions respectively. The Sig. T obtained from $\mathrm{X}_{6}, \mathrm{X}_{7}, \mathrm{X}_{1}$ and $\mathrm{X}_{2}(0.0000,0.0001$, 0.0002 and 0.0321 ) respectively indicated a significant contribution of the variables. Other variables $\left(\mathrm{X}_{3}, \mathrm{X}_{4}, \mathrm{X}_{5}\right)$ contributed less than $1 \%$ to the explained variation. By implication, an increase or decrease in these variables would influence students' performance either positively or negatively.

The finding corroborates the World Bank Report (1990) that the policies of government to a very large extent influence the academic situation in schools as well as the performance of students in public examinations. Of importance to note again in respect of the present study is that its finding supports the findings of Adepoju (2002) and Owoeye (2000) that distribution and location of secondary schools in both urban and rural areas (urban - rural dichotomy) was significantly related with academic performance of students.

## Planning and policy implications of the findings

The findings of this study have implications for educational planning and policy in Nigeria. For instance, the students' academic performance in public examinations such as those investigated in this study are very significant and worthy of note by educational planners, policy makers, curriculum developers, teachers, government, students, researchers, guidance counsellors and even, the parents. Adepoju (2002) claimed that parents are very conscious of the type of schools they would prefer to send their children for good performance in English Language and Mathematics. They would not send their children that hardly record distinction and credit in English Language and Mathematics.

Educational planners, policy makers, curriculum planners and researchers are also challenged to carry out an investigation (action research) into the
possible causes and effects of students' poor academic performance in examinations with a view to identifying and proffering solutions to the emerging problems at the classroom level.

Government policies and positions in terms of adoption and application of social demand approach (educational planning method), mass promotion without attaching a benchmark, free education programme, location and distribution of school, mass transfer of teachers, expenditure on education as well as other intervening variables such as the contributions of service for teachers, and incidence of industrial action and their effects on the performance of students in public examinations and staff productivity need to be thoroughly investigated and reviewed. There is no gainsaying the fact that where government policies or positions are not favourable enough to the schooling system, improved performance of students in pubic examinations may be a difficult task to be realised.

Of course, where the above scenarios and incidences occur, it therefore becomes imperative for the government, educational planners, policy makers, curriculum planners, teachers and other stakeholders in education industry to develop remedial mechanism. The type of remedial mechanism being referred to here requires high commitment from the experts mentioned above so as to able to engender effective teaching - learning outcome. For instance, government should be able to focus more attention on education by earmarking substantial allocation for the system which would ultimately result in recruitment substantial allocation for the system which would ultimately result in recruitment of more qualified teachers, providing instructional materials, constructing physical facilities and providing other essential materials in the schools.

The information about the trend in students performance in a particular subject over a given period such as the one ex-rayed in the present study no doubt, provides the strengths and weaknesses of the performance, which could form the basis for rational decision or policy making by the government, individuals, institutions, teachers, curriculum experts, planners policy makers and even the parents.

It has been established that the location / distribution of secondary schools was significantly related with students' academic achievement in public examinations (Ajayi,1998; Owoeye, 2000; Benjamin, 1998 and Adepoju, 2002) and as established in the present study, students in urban schools performed significantly better than those in rural schools (See Tables I, II, III,
$\mathrm{IV}, \mathrm{V}$ and VI$)$. The reason is partly not unconnected with the policy of the government in the state under-study over the years to locate / distribute secondary schools in some areas without adequate consideration for the essential parameters such as the catchment area, population structure, schoolage population, home-school distance, topography as well as other factors such as the concentration of qualified teachers in the urban areas, provision of facilities, etc., to mentioned but few of them.

Research finding and enough evidences (Adepoju, 1995; 2002; Olutola, 1981) have revealed that policies and decisions on location and distribution of schools in Nigeria are very much based on political motivation. In order to address these inadequacies, it is very expedient for educational planners to be conscious of their strategic roles by advising the government in power of the need to follow due process and to work according to the ethic of their profession which demands objectivity in matters that concern the future of the children. More importantly, educational planners should always consider the essential parameters before new schools are established. They should see themselves as professional rather than "errand boys" of the government in power. Implicitly, teachers on their part, based on the findings of this study are challenged to re-examine and self-assessment of their pedagogical methods / approaches and refocusing themselves towards achieving improved performance of students in their subject areas in public examinations. Of course, they should be conscious of the fact that if students perform poorly in their subjects at public examinations, they are to share from the blame.

## Conclusion and recommendations

The study has revealed the trends of students' performance in English Language and Mathematics at the SSCE for a period of three consecutive years (2005, 2006 and 2007) in Oyo State, Nigeria. Ten secondary schools that spread across the six academic and administrative zones of the State were randomly selected for the study ( 5 urban and 5 rural). From the result obtained, it was established that students' performance in urban schools was higher than what was obtained in rural schools (percentage of passes and failure was used in this context). The study further established it that the mean (x) percentages of students' performance in Mathematics were higher than that of English Language throughout the period under consideration. Government policies / positions in terms of mass promotion of students from one grade to other without using a benchmark, free education programme, mass transfer of teachers, location / distribution of secondary schools,
expenditure on education to a very large extent were found to be significantly related to students' performance in public examinations.

Based on the finding of this study, it is therefore recommended that;
A remedial mechanism should be developed and built into the school system by the government, teachers, educational planners, policy makers, curriculum planners, parents and other stakeholders in education industry. Government should always be conscious of the implication of its policies and positions on schooling and the multiplier effect on academic performance of students and teachers productivity.

Promotion of students into higher grade or level or class should be based on prescribed benchmark. Any student that fails to meet such prescribed benchmark should not be promoted. This would go a long way in improving the quality, standard and the performance of students in public examinations.

Teachers, particularly, those teaching English Language and Mathematics in secondary schools should be adequately motivated and encouraged to attend training workshops, seminars and in-services-training to improve their pedagogy. Free education programme of the various governments in Nigeria should be thoroughly examined since the programme to some extent affects quality education. Parents should be adequately involved if quality education is to be achieved.

Parents should also be well educated to take up the challenges and responsibility of financing the education of their children. Some parents for instance, believe that free education programme in Nigeria implies providing their children with all instructional materials such as biro, pencil, ruler, textbook, uniform, sandal, belt, food, allowances etc. free of charge by the government. Also, Functional supervision mechanism should be developed and built into the schooling system to ensure quality assurance of the system. For instance, Adepoju and Raji's (2004) study revealed among other things that functional supervision was found to be significantly related to quality assurance of secondary education in Oyo, State.

It is hoped that if the above recommendations are thoroughly and effectively considered, students' performance in English Language and Mathematics as well as in other subjects in both internal an external examinations would improve. Also, the problems of quality of the secondary school product and standard of education would also be addressed.

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| $\begin{aligned} & \frac{3}{2} \\ & \frac{3}{6} \end{aligned}$ |  |  |  |  |  |
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| $\begin{aligned} & (32.1) \\ & (44.6) \\ & (38.6) \\ & (16.1) \\ & (0.0) \end{aligned}$ | $\begin{aligned} & (20.9) \\ & (34.8) \\ & (30.2) \\ & (47.0) \\ & (38.2) \end{aligned}$ |  |  |  | N |
| $\begin{aligned} & (31.1) \\ & (48.6) \\ & (41.8) \\ & (74.0) \\ & (88.0) \end{aligned}$ | $\begin{aligned} & (57.5) \\ & (64.0) \\ & (40.0) \\ & (42.3) \\ & (56.6) \end{aligned}$ | $\begin{aligned} & \infty \\ & \infty \\ & 0 \\ & 0 \\ & \vdots \\ & \square \end{aligned}$ | $\begin{aligned} & \frac{n}{2} \\ & \stackrel{0}{2} \\ & \frac{0}{n} \end{aligned}$ |  | No |
| $\begin{aligned} & (68.9) \\ & (51.4) \\ & (58.2) \\ & (26.0) \\ & (12.0) \end{aligned}$ | $\begin{aligned} & (42.5) \\ & (36.0) \\ & (60.0) \\ & (57.7) \\ & (43.4) \end{aligned}$ |  | $\begin{aligned} & \frac{n}{2} \\ & \stackrel{0}{0} \\ & \frac{0}{n} \\ & \hline \end{aligned}$ |  | No |
| $\begin{aligned} & (61.9) \\ & (59.5) \\ & (72.1) \\ & (54.9) \\ & (60.7) \end{aligned}$ | $\begin{aligned} & (56.8) \\ & (60.3) \\ & (65.6) \\ & (52.6) \\ & (57.2) \end{aligned}$ | $\begin{aligned} & > \\ & \infty \\ & 0 \\ & 0 \\ & \sigma \\ & \square \end{aligned}$ | $\begin{aligned} & \frac{n}{2} \\ & \stackrel{\rightharpoonup}{\mathrm{o}} \\ & \frac{0}{n} \end{aligned}$ |  | N |
| $\begin{aligned} & (38.1) \\ & (40.5) \\ & (27.9) \\ & (45.1) \\ & (39.3) \end{aligned}$ | $\begin{aligned} & (43.2) \\ & (39 / 7) \\ & (34.4) \\ & (47.4) \\ & (42.8) \end{aligned}$ |  |  | \|r | $\underset{O}{N}$ |


A Study of Secondary School Students' Academic Performance at the SSCE...

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & (39.1) \\ & (46.9) \\ & (10.0) \\ & (18.6) \\ & (84.8) \end{aligned}$ | $\begin{gathered} (26.81) \\ (50.0) \\ (6.0) \\ (25.6) \\ (55.6) \end{gathered}$ | $\begin{aligned} & T \\ & \Omega \\ & \Xi \\ & \Xi \end{aligned}$ | － |  | 花 |
| $\begin{aligned} & (60.9) \\ & (53.1) \\ & (90.0) \\ & (81.4) \\ & (15.2) \end{aligned}$ | $\begin{aligned} & (73.2) \\ & (50.0) \\ & (94.0) \\ & (74.4) \\ & (44.4) \end{aligned}$ | $\begin{aligned} & T 1 \\ & \Omega \\ & \Xi \\ & \Xi \end{aligned}$ | $\frac{\mathrm{e}}{\mathrm{o}} \mathrm{x}$ |  | 荷 |
| $\begin{aligned} & (60.3) \\ & (2.3) \\ & (12.3) \\ & (3.8) \\ & (76.3) \end{aligned}$ | $\begin{gathered} (30.5) \\ (1.1) \\ (5.3) \\ (0.0) \\ (56.7) \end{gathered}$ | $\begin{aligned} & \text { TI } \\ & 0 \\ & I \\ & = \end{aligned}$ |  |  | $\begin{aligned} & \mathrm{N} \\ & \mathrm{O} \\ & \mathrm{Z} \end{aligned}$ |
| $\begin{aligned} & (39.7) \\ & (97.7) \\ & (87.7) \\ & (96.2) \\ & (23.7) \end{aligned}$ | $\begin{aligned} & (69.5) \\ & (98.5) \\ & (94.9) \\ & (100.0) \\ & (43.4) \end{aligned}$ | $\begin{aligned} & \mathrm{T} \\ & \Omega \\ & \mathrm{I} \\ & = \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline \frac{n}{n} \\ \frac{1}{2} \\ \frac{0}{n} \end{array}$ |  | $\begin{array}{\|c} N \\ \text { No } \\ \hline \end{array}$ |
| $\begin{gathered} (36.1) \\ (48.4) \\ (6.7) \\ (5.9) \\ (37.5) \end{gathered}$ | $\begin{aligned} & (22.2) \\ & (23.2) \\ & (3.3) \\ & (0.0) \\ & (54.2) \end{aligned}$ | $\begin{aligned} & \text { T1 } \\ & \Omega \\ & \Xi \\ & \Xi \end{aligned}$ |  |  | 荷 |
| $\begin{aligned} & (63.9) \\ & (51.6) \\ & (93.1) \\ & (94.1) \\ & (62.5) \end{aligned}$ | $\begin{aligned} & (77.8) \\ & (76.8) \\ & (96.7) \\ & (100.0) \\ & (45.8) \end{aligned}$ | $\begin{aligned} & \text { TI } \\ & Q \\ & \text { I } \\ & \Xi \end{aligned}$ |  | $\left\lvert\, \begin{aligned} & \text { 줄 } \\ & \underset{\substack{0}}{\text { Tod }} \end{aligned}\right.$ | N |

[^0]

Table III: Percentage passes (Al-C6) in English Language and Mathematics at the SSCE (2005 -2007)

|  | 2005 | 2006 | 2007 |
| :---: | :---: | :---: | :---: |
|  | School | School | School |
| Subject | A B C D E F G HIJ | A B C DEF G HI J | A B C D E F G HIJ |
| English Language | N <br>  |  |  <br>  |
| Mathematics |  |  $\infty \dot{\sim}$ ヨ |  |

Table IV: Means (x) percentage of students' general performance in English Language and Mathematics (2005-2007).

| Variable | 2005 | 2006 | 2007 |
| :--- | :--- | :--- | :--- |
|  | - | - | - <br> $(\mathrm{x} \%)$ |
| English Language | 49.3 | 35.4 | 39.6 |
| Mathematics | 56.8 | 43.9 | 44.4 |

Note: $x=m e a n s, \%=$ percentage
Table V: Mean (x) percentage of students' general performance in urban and rural secondary schools (2005-2007).

| Variable | 2005 <br> (x \%) | 2006 <br> (x \%) | 2007 <br> (x \%) |
| :--- | :--- | :--- | :--- |
| Urban | 69.8 | 54.4 | 60.2 |
| Rural | 36.4 | 24.9 | 23.8 |

Note: $\mathrm{x}=$ mean $\%=$ Percentage

Table VI: Mean (x) percentage of students' performance in English Language and Mathematics in urban and rural secondary schools (2005 2007)

|  | 2005 <br> - <br> $(X \%)$ |  | 2006 <br> - <br> $(X \%)$ | 2007 <br> - |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Variable | Eng. Lang | Maths | Eng. Lang | Maths | Eng. Lang | Maths |
| Urban | 65.8 | 73.7 | 52.1 | 56.7 | 58.5 | 61.8 |
| Rural | 32.8 | 39.9 | 18.7 | 31.0 | 20.6 | 26.9 |

$\mathrm{x}=$ Mean

Table VII: Regression summary explaining students' performance (dependent variable) and government policies / positions (independent variables)

|  |  |
| :--- | :--- |
| Multiple R | 0.74747 |
| R square $\left(\mathrm{R}^{2}\right)$ | 0.55871 |
| Adjusted, R Square $\left(\mathrm{R}^{2}\right)$ | 0.06012 |
| F- ratio | 19.57496 |
| Standard Error | 3.1021 |

Where: $R$ square $\left(R^{2}\right)$ is the coefficient of determination.

Table VIII: Analysis of variance of the prediction of academic performance at SSCE by the independent variables.

| Source of <br> variance | Df | Sum of square | Mean square | F-ratio | Sig level |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Regression | 7 | 1001.86553 | 143.12365 | 19.57496 | $0.0001^{*}$ |
| Residual | 64 | 8824.11421 | 137.87678 |  |  |

* Significant at $\mathrm{P}<0.05$

Table IX: Relative contribution of each of the independent variables (predictor variables) to the dependent variable.

| Independent <br> variable | Beta in | $\%$ <br> contribution | T-Value | Sig-T | Decision |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{X}_{1}$ | 0.230652 | 23.0 | 3.062 | $0.0002^{*}$ | S |
| $\mathrm{X}_{2}$ | 0.131935 | 13.2 | 2.240 | $0.0321^{*}$ | S |
| $\mathrm{X}_{3}$ | 0.005662 | 0.57 | 0.368 | 0.2887 | NS |
| $\mathrm{X}_{4}$ | 0.003001 | 0.30 | 0.688 | 0.5227 | NS |
| $\mathrm{X}_{5}$ | 0.002037 | 0.20 | 0.319 | 0.6000 | NS |
| $\mathrm{X}_{6}$ | 0.305002 | 30.5 | 4.108 | $0.0000^{*}$ | S |
| $\mathrm{X}_{7}$ | 0.230561 | 23.1 | 3.433 | $0.0001^{*}$ | S |
|  |  |  |  |  |  |

Significant at $\mathrm{P}<0.05$


[^0]:    schools（2005－2007）
    Table II：Percentage passes and failure at the SSCE in English Language and Mathematics in rural secondary

