A MULTIPREDICTOR EVALUATION OF SECONDARY SCHOOL STUDENTS’ ACADEMIC PERFORMANCE: ISSUES AND IMPLICATIONS FOR EDUCATIONAL ACCOUNTABILITY

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Abstract
This study investigated a combinational effect of four predictor variables (government, school, home and the child) on secondary school students’ academic performance in Oyo State. The study adopted a descriptive survey research design. Two research questions guided the study. Simple stratified random sampling technique was used to select 576 respondents from the population 11,733 public secondary schools teachers. A well validated researcher designed instrument tagged ‘Academic Performance Inventory’ (API) with reliability index of 0.89 (test-retest of three weeks interval) was used for data collection. Multiple regression analysis statistics was used to test the research questions at P<0.05 level of significance. Results showed that the combination of four predictor variables significantly predicted academic performance. Government was the highest predictor, followed by the school, the home and the child, respectively Part of the recommendations stated that the Government should strictly adhere to United Nation recommendation of 26% annual budgetary allocation to education sector. It was concluded that all the stakeholders should be held accountable for poor academic performance, though the highest responsibility lies with the government.

Keywords: Secondary schools, Students’ academic performance, Accountability.

Introduction
Education is considered as investment in most developing countries. This is due to the fact that education is now globally recognised as an instrument “par excellence” for development and eradication of poverty. In Nigeria, stakeholders are disturbed following the yearly performance of students in the Secondary School Certificate Examination (SSCE). Student outcomes do not match the public investment in education. Not only that Nigerians no longer believe in public schools due to decaying of infrastructure. What the public see are massive failure in public examination and indiscipline (Balogun, 2005; Ekwesili, 2006 & Ogunsaju, 2004).

A worthwhile investment in education will lay a true foundation for an enduring development. The idea behind the huge resource allocation to secondary school level of education in the nation was to revamp the glory of education sub-sector, as it was then plagued by poor academic performance. The broad aim of secondary education is to prepare students for higher education and useful living in the society (FGN, 2008). Results of May/June 2011 National Examination Council (NECO) revealed that only 26% of the candidates that sat for the examinations scored five credits and above including English Language and Mathematics, being the two subjects that are central to admission requirement of Nigerian higher institutions. In 2010 only 21% of the candidates passed with distinction or credit in five subjects and above including English language and Mathematics. The situation was worse in 2009 where only
10.53% of the candidates scored five credits and above including English language and Mathematics (Ayodele & Ige, 2012).

From time immemorial, learning outcomes (passes or failures) could largely be attributable to the quality of instructions received by the learners. An underlying assumption is that causes of poor academic performance could be varied and multi-dimensional. For example, Majoribank (1995) opined that aspirations of peers could affect an individual’s effort and achievement in school. In the same vein parents are more influential than peers on plans for future schooling. However, there are more fundamental barriers to the success of learning outcomes, which neither policy makers nor planners adequately grasped. Prominent among them is the problem of accountability and control in our education system.

When President George Bush assumed office, he undertook some educational reforms based on his observations about the dwindling quality of public education in America and the need for America to rise up to the challenges of post modern world. Based on this, his administration educational reforms tackled four key issues, namely accountability, standard, test and choices (Reeves, 2001).

Accountability is here defined as a state of accepting and demonstrating responsibility for actions taken or not taken in connection with one's designated position. Control is a situation of demanding accountability from an employee or any person by holding him responsible for the consequences of his action or inaction (Unachukwu, 2001). According to Benjamin (2011), accountability is not a means of relieving teachers of their jobs, but it is a guarantee that all students, regardless of place of origin or social status will acquire the minimum skills necessary to take full advantage of the choices that are open to him upon the successful completion of his public school.

In the study of students’ academic achievement in secondary schools, Aderonmu (1995) submitted that pupils’ achievement is determined by many factors other than skills and efforts of teachers. Such factors are the learners’ socio-economic status and home environment over which educations exercise no control and peer groups in the school, which the teacher only minimally influences. Nwagwu and Salami (2000) and Bakare (1999) have all reported that several factors including teaching methods, interpersonal relationships among school personnel, nature of curriculum and school topography could affect the academic performance of learners. Ehrenberg and Brewer (2005) and Ferguson (2001) asserted that students learn more from teachers with strong academic skills.

Odedele (2000) opined that anxiety could affect students’ academic performance and stressed the importance of home in cognitive stimulation on academic performance. Also, Aremu (2001) discussed the importance of home psychological climate on child emotional states and academic performance. Further on this, Bakare (1997) identifies six basic cognitive skills that a child must acquire for him to do well. This, they explained could be better formed and enhanced through positive child-parent interaction. Still on determinants of student academic success, Aduwa (2004) reported that a student’s home environment and their cognitive abilities affects their academic success.
Akinade (2009) in his study identified lack of quality students as ill militating against the success of public schools. In a similar view Adetayo (2009) reported laziness on the part of Nigerian pupils. According to Odedele (2009), the way and manner the child perceives himself could affect his academic performance. Not only that, the students behavioural patterns have strong links to academic performance. In the same way, funding could be described as a critical determinant of student academic performance.

Quality education according to Tawari (2002) and Okromma (2006) is a function of adequate funding. It has become obvious that Nigeria's neglect of the UNESCO funding formula of 26% annual budgetary allocation to education is detrimental to the nation's developmental aspiration. This neglect has already precipitated crises in the entire educational system. The chronic underfunding crises results in poor teaching and learning process. Perhaps the most severe of the problem is poor funding which directly or indirectly leads to other perennial setbacks such as shortage of qualified teachers, death of infrastructure and shortage of books. Based on this background, it will be necessary to unfold some predictor variables of student academic performance with a review to discussing some thorny issues and implications for educational accountability and control.

Research Questions
In order to have necessary guide for this study, the following research questions are raised and answered accordingly;

(i) What is the joint effect of predictor variables (home, child, school and government) on the academic performance of secondary school students?
(ii) What is the relative contribution of each of the predictor variables (home, child, school and government) to academic performance of secondary school students?

Methodology
This study adopted a descriptive survey research design involving the use of questionnaire and checklist. The study populations include 324 public secondary schools in the 33 Local Government Areas (LGAs) in Oyo State. There are 11,732 teachers in the public secondary schools in Oyo state. Stratified random sampling technique was used to sample 24 out of the 33 LGAs (76%). Stratification was based on the dimension of the three senatorial districts in Oyo state. Simple random sampling technique was used to select two public secondary schools in each of the sampled LGAs to give a total of 48 sampled schools. The teachers (n = 576) within these schools were the survey respondents.

The instrument used for this study was a questionnaire tagged “Academic Performance Inventory” (API). The instrument covers four predictor variables (Government, School, Child and Home). The items were structured on a four-point modified likert-type rating format. Experts (in the test construction, Educational Management and English language) from University of Ilorin and Ibadan were used to moderate the face, content and construct validity of the instrument. A reliability index of 0.89 was established, using test-retest method of three weeks interval. This attests to the adequacy of the psychometric properties of the instrument. Check list was used to obtain students' academic performance. NECO results from 2009 to 2013 were collected from the respective schools.

Results
The results and interpretation of the findings of the study are as follows:

**Research Question 1:** What is the joint effect of predictor variables (home, child, school and government) on the academic performance of senior secondary school students?

<table>
<thead>
<tr>
<th>Multiple R</th>
<th>R square</th>
<th>Adjusted R Square</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.920</td>
<td>.846</td>
<td>.846</td>
<td>5.9022</td>
</tr>
</tbody>
</table>

**Table 1: Composite contribution of the predictor variables to academic performance**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Square</th>
<th>df</th>
<th>Mean Square</th>
<th>F-ratio</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>771224.31</td>
<td>4</td>
<td>187224.705</td>
<td>5215.530</td>
<td>0.00</td>
</tr>
<tr>
<td>Residual</td>
<td>31213.22</td>
<td>584</td>
<td>36.123</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>802437.53</td>
<td>588</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P<0.05

In Table 1, the regression analysis yield a coefficient of multiple regression (R) of 0.920 and a multiple R-square (R²) of .846. The R² values translated into 85% of the observed variance. This means 85% of the variance in the academic performance is accounted for by all the four predictor variables when taken together. The significance of composite contribution or the prediction was tested at P<0.05, producing the F-ratio of 5215.530 at the degrees of freedom (df=4/584). This implies that the joint contribution of the independent variables to dependent variables was significant and that other variables not included in this model may have accounted for the remaining variance.

**Research Question 2:** What is the relative contribution of each of the predictor variables (home, child, school and government) to academic performance of secondary school students?

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SEB</th>
<th>b</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>87.413</td>
<td>1.714</td>
<td>.259</td>
<td>41.042</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Home</td>
<td>101.502</td>
<td>2.024</td>
<td>.281</td>
<td>44.013</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Government</td>
<td>127.204</td>
<td>2.301</td>
<td>.272</td>
<td>49.120</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>School</td>
<td>121.651</td>
<td>2.123</td>
<td>.285</td>
<td>51.161</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Consumer</td>
<td>-697</td>
<td>6.012</td>
<td>-.285</td>
<td>-102.216</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

Table 2, reveals the contributions of each of the four predictor variables to student academic performance as expressed Beta weights. Using the standardized regression coefficient of the predictor variables, Government (Beta = 127.204, T = 49.120, P<0.05) was the highest contributor to student academic performance; followed by school (Beta = 121.651, T = 51.161, P < 0.05) followed by home (Beta = 101.502, T = 44.013, P<0.05) followed by child (Beta = 87.413, T = 41.042, P<0.05), respectively
Discussions

The study established some predictor variables, such as home, child, school and government as factors that affect students’ performance at secondary school level. In this study 85% of the observed variance were accounted for by the four variables investigated. The F-ratio value (5215.530) of the analysis was found to be significant at the 0.05 alpha level. This implies that predictor variables in the prediction of academic performance were not due to chance factor. Factor residing in government was the highest, this is in line with the view of Ogunsanya (1999) that underfunding of education, instability of educational policy are major factors affecting academic achievement. Findings revealed school as a factor in student academic performance. This corroborates the view of Aremu (2001). The success of the students in any examination depends largely on teachers and that the school environment is a critical factor in students’ academic performance.

The study equally showed that the home has a great influence on the pupils academic performance. This is in line with the view of Ajila and Olutola (2000), Eweniyi (2005) that the states of home affect the individual since the parents are the first socializing agents in an individual’s life. The findings equally revealed child as a predictor variable of academic performance. This is because examination anxiety manifested by the learner could affect his performance in academic and that students behaviour patterns have strong link to academic performance.

Issues and Implications for Educational Accountability

In this study, four variables were identified in predicting students’ academic performance. The government, school, home and social composition of the student were critical determinants of educational motivation and achievement. From the finding, the government is ranked first, this is occasioned by poor budgetary allocation to education system (less than 26% UNESCO recommendation) that has resulted in dilapidated classroom buildings, laboratories and equipment and irregular payment of teachers salaries that do warrant frequent strikes or how do we explain a situation whereby funds meant for recurrent expenditures, precisely salary, were diverted to capital projects or for political campaign activities. All these among others pave way for declining student academic performance in Nigerian secondary schools. This logically implies that government/ politicians should be the first to be held accountable for poor student academic performance in Nigerian secondary schools.

In a similar vein, this finding equally revealed the school, home and the child as factors affecting academic performance. Thus, to some extent accountability lies in them. It is the school administrators that are ultimately held accountable for the pupils’ progress. They must therefore work with teachers in creating an environment where both teachers and pupils will perform at their best. As noted by Lunenburg (2008) teachers have the responsibility for what might be called achievement accountability. In other words, the classroom teacher has the responsibility to find out what skills his pupils needs to ensure continuous progress.

There is need for learner friendly school environment which are virtually not available. Also factors like teaching methods and school topography affects students’ academic performance. The child also becomes accountable because students behavioural patterns have strong links to
academic performance. The locus of control and examination anxiety manifested by the child affects his academic performance.

Many persons feel threatened by the idea of accountability, and even more disturbed by the way in which the concept is being translated into action. Teachers have the fear that the required level of performance will be unrealistic and unattainable, and this may result in punitive actions against them, especially when the school system does not meet the demand of the parents and the ministry of education.

Teachers could be of the view that while they are likely to be the ones to be held accountable, they often do not have the resources or the power to alter policies or practices which must be changed to pave way for improvement. They cannot on their own buy materials, and initiate new curriculum that necessitate improvement.

Another issue is that schools are not the only factor of change in pupil education. Much of what a pupil learn depends on experiences provided in other setting such as the home or the child himself. A teacher who is accountable for raising the level of educational performance of a ‘culturally deprived’ pupil has a much tougher job than one who has to move youngsters from an advantaged background to the same level of achievement.

Recommendations

(i) The government at all levels (Federal, State, and Local) should allocate a reasonable percentage of their budget to education sector. However, this is not expected to be less than 26% of annual budget as recommended by the United Nations.

(ii) The importance of home psychological climate on a child’s academic performance cannot be ruled out. Based on this, the school is expected to work closely with the home especially on matters concerning ‘special’ students’ such as students with learning difficulties, and those who are emotionally disturbed. Therefore the Parent Teachers Association as an organ of school administration needs to be strengthened.

(iii) The school administrator should perform both supervisory and administrative functions. The latter is however meant to complement the first. The school principal has to be a practical internal supervisor not sitting administrator, working closely with teachers to ensure effective teaching and learning.

(iv) Classroom teachers must be made to view accountability as something designed towards providing them an opportunity for objective performance, with a view to improving the quality of their instruction.

(v) In service training will play an important role in the implementation of a successful system of accountability. Both teachers and administrators will have to develop a sophisticated set of skills for the purpose of setting goals, defining behavioural objective, providing for the involvement of parents and pupils in the decision making process, and prescribing guidelines for instruction and evaluation.
Conclusion
The bane of educational development in Nigeria is lack of accountability. The rhetoric question is “who should be held accountable for the poor academic performance? This study has been able to establish some predictor variables of academic performance in secondary schools. Improved academic performance is achievable with the cooperative efforts of all the stakeholders, the government, school, home and the child himself inclusive. This is based on the fact that education for all is the responsibility of all.

References


