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Some Psycho-Academic Variables as Determinants of Students Performance in English Studies in Akwa Ibom State, Nigeria (177-188)

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Abstract

The focus of this study was particularly to examine the extent to which the psycho-academic variables of (study habit, test anxiety, attitude to schooling and attitude towards English studies and test wiseness) relatively and collectively contribute to students' performance in English studies. Two specific purposes and hypotheses were formulated to guide the study. This ex post facto research employed simple random sampling technique in selecting a total of 853 (407 males and 446 females) from 20 secondary schools in Akwa Ibom State. The study made use of two researcher developed and standardized instruments namely; a 50-item English Studies Achievement Test (ESAT) and Student Psycho-academic Information Questionnaire (SPIQ). Data generated from these instruments were analyzed using multiple regression which resulted in the generic equation: $ENG = -15.292 + 0.297SH + 0.00013 TA + 0.574AS + 0.718AE + 0.311TW$. The result showed that study habit, attitude to schooling, attitude towards English studies and test wiseness could predict students' performance in English studies as they were also found to have significant effects on students'

performance in the subject, but the effect of test anxiety on students' performance was not significant. It was recommended that teachers and guidance counsellors in particular should educate the students on the need to improve upon their attitude to studies and to cultivate good studies habit in order to improve on their academic performances.

Introduction

Even though it has been generally ascertained that examination is not the true test of knowledge, the use of tests examinations for various reasons including certification and promotion cannot be avoided. This has been one of the major reasons for the Junior Secondary School (JSS) examination. Time was when the Junior Secondary School certification was the second certificate in the Nigerian School System after the First School Leaving Certificate acquired on successfully going through primary education. But recently, with the advent of the UBE (Universal Basic Education) a greater importance has now been attached to the JSS certificate, which now becomes the first qualification a child can acquire to be enrolled into the Senior Secondary School or into the world of work. This situation is much more important as the subject area focused on by this research - English studies, a compulsory subject that the student must pass in to be qualified to acquire this certificate.

Statement of the Problem:

Students' performance at the Junior Secondary School level of education has been researched into severally; studies have been conducted on the effects, relationship or influence of various factors such as personal, psycho-social, academic, teacher and even societal factors on students' performance on this examination. Various and varied results have been the outcome of those research endeavours. Yet some gaps still exist in the area of the possible effect of some psycho-academic factors such as test anxiety, test wiseness, study habits and attitudes toward these subject areas as they affect students' performance of a key subject like English Studies at the Junior Secondary School level. This research is therefore to statistically ascertain the individual and collective effects of aforementioned psycho-academic variables on JSS 3 students' performance in English Studies.

Purpose of the Study:

The purpose of this study was to specifically;

1. Examine the individual contributions of
 - a. study habits,

- b. test anxiety,
 - c. attitude towards schooling,
 - d. attitude towards English studies and
 - e. test wiseness to the prediction of JS 3 students' performances in English studies.
2. Examine the collective contributions of the listed psycho-academic variables to the prediction of JS 3 students' performances in English studies.

Statement of Hypotheses

In order to achieve the outlined purpose, the researcher formulated the following hypotheses To provide a guide for the study:

1. The individual contributions of the listed psycho-academic variables (study habits, test anxiety, attitude towards schooling, attitude towards English studies and test wiseness.), do not significantly predict JS 3 students' performance in English studies.
2. The collective contributions of the listed psycho-academic variables (study habits, test anxiety, attitude towards schooling, attitude towards English studies and test wiseness.), do not significantly predict JS 3 students' performance in English studies.

Review of Related Literature:

Asagwara (1994) sees study habits as strategies which a student applies for acquiring knowledge, skill, ideas and competence. Good study habits are learnt and there make success predictable. A study conducted by Benneth, Dunne and Carre (2000) on reading skills and scholastic achievement had a correlation coefficient range of 0.50 to 0.70, which demonstrated that good reading skill is one of the criteria for good performance. They further established that "reading performance varies with the reader's attitude and interest". The adoption of a good study habit has been found to bring about a considerable level of improvement in student academic performance (Idika, 2004). This assertion had been buttressed by a research undertaken by Isangediighi (1997) using 312 junior secondary school students in order to ascertain if study habit play a part in at student's level of achievement. On using analysis of variance on the data gathered, the result showed that the high achievers group significantly performed better than the low achievers group because of their use of good study habits.

The psycho-academic variable of anxiety according to Mitchell (2002) caused reduced thinking ability and increased agitation and sensitivity to sound and sight – this reduces the likelihood of success and increases the possibility on failure test a tests. Studies conducted by Petz (1999), Hembree (1999) and Amadioha (2006) have shown negative relative relationship between achievement and test anxiety but a work done by Gierl and Bisanz (1995) rather indicate a no significant difference in the early years but females were found to exhibit more mathematics test anxiety in secondary schools.

Andrew (1998) conducted a study using 40 middle school students to determine if test – taking strategies affect test scores of students, results of the study showed that subjects who learned and used specific test taking strategies performed significantly on the post test scores than the control group. Other studies by Chance (1992) and Mastropieri (1995) lend credence to the fact that test wiseness strategies facilitate improved school performance. From a Nigeria based study conducted by Ijeoma (2002) on 500 senior secondary school students in Imo State, the results from a 2-way ANOVA used showed that, test wise students in the research performed significantly better than the non-test wise students.

According to Amoo and Rahman (2004), when poor performance persists, it could cause the formation of poor attitude; conversely, poor attitude towards a subject prior to learning could also lead to poor achievement. From a study conducted by Akubiro and Joshua (2002) students' attitude towards science was found to be significant predictor of student's performance in the subject, from a result analysis with an F-ratio of 94.381, significant at 0.05 alpha level using a sample of 300 students. But from a similar study by Amoo and Rahman (2004) in Lagos state, Nigeria, using t-test analysis on subjects, a no significant attitude towards mathematics on the basis of gender was found to be the result.

In the course of this review of literature the researcher observed a rather low available literature on that subject in relation to English studies/Language. Thus the focus of this research on English studies a compulsory subject in our school system becomes quiet necessary.

Methodology

This research adopted the causal comparative design because in the course of conducting this research, the researcher had no direct control over the

changes in the variables under study, therefore, the inferences from the dependent variable made are only based on the natural variations in the independent variables as they affect or influence the dependent variables. The population of this study was made up of all the JS 3 students from both public and private secondary schools in Akwa Ibom State. There are a total of 438 secondary schools in Akwa Ibom State; this is made up of 240 public and 198 private schools with an approximate JS 3 student population of 29,000 for the 2005/2006 academic year. A total of 20 schools were sampled, from which 50 students were randomly sampled to make up a study sample of 1000 respondents. Out of the 1000 students, complete and correct data were obtained from 853 respondents of which, 407 were males and 446 were females representing a percentage of 47.7% and 52.3% respectively.

Two instruments were employed by the researcher to gather relevant information for this study; the instruments were the English Studies Achievement Test and the Students' Psycho-Academic Information Questionnaire (SPAIQ). To ascertain the respondents' academic performance in English studies, a 60-item test for English studies was constructed and used. The researcher developed the instrument in accordance with the JSS 3 syllabus. Considering the cognitive level of the students, items included in the instrument were based on knowledge, comprehension and application levels of Blooms taxonomy of educational objectives. The content areas tested on were: comprehension; antonyms; structure; synonyms; spellings and register.

The students' psycho-academic information questionnaire (SPAIQ) was made up of two parts. Part A was to enable the researcher elicit demographic information on the respondents, while Part B consisted of 10 items for each of the five (5) psycho-academic variables under study, through which the respondents were to express their level of agreement or otherwise to each statement based on a 4 point Likert type scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The researcher personally constructed the items for each variable in the study. The items on the questionnaire were vetted and reviewed for face validity by measurement and evaluation experts while Secondary school teachers who are currently teaching English studies vetted the achievement tests items appropriateness and face validity.

The English studies achievement test was pre-tested using 100 JS3 students in four secondary schools within the study area. To make the final fifty (50)-

item instrument, items with negative discrimination indices were discarded while those with low discrimination indices between 0.2 and 0.45 were restructured. The reliability coefficient for the English studies achievement test was 0.87 this was ascertained through the split-half method.

The reliability of the Students' Psycho-Academic Information Questionnaire was calculated on the basis of the subsets in the instrument using the Cronbach alpha statistical procedure. The reliability coefficient for each subset is shown on Table 1.

The researcher with the assistance of English studies teachers in the sampled schools administered the instruments. These teachers were enlisted by the researcher as research assistance for the proper collection and collation of the relevant data from the respondents. Each instrument was administered within a day in each school so, data collection in each school lasted two days.

Presentation and Discussion of Results

The results from analysis of collected data show that the psycho-academic variables in the study had mean scores ranging from 17.95 to 32.72 and standard deviation of 3.54 to 5.05. The mean score for the English achievement test was 44.10 with and standard deviation of 17.26. Details are indicated in Table 2.

Hypothesis One

To verify the hypothesis which proposed that individual contributions of the listed psycho-academic variables (study habits, test anxiety, attitude towards schooling, attitude towards English studies and test wiseness,), do not significantly predict JS 3 students' performance in English studies, the data gathered from the respondents were analyzed using multiple regression. The results as indicated in Table 3 show that all the psycho-academic variables except test anxiety made relative significant contributions to JS 3 students' performance in English studies with the regression coefficient (b) of 0.718, 0.574, 0.311 and 0.297 for attitude towards English, attitude to schooling, study habit, and test wiseness respectively. Correspondingly, the strength of the contributions of each of the variables are as indicated by their beta weights, all these were significant 0.05 alpha level. The only variable that did not significantly in predict students' performance in English studies was test anxiety. A detailed study of the test result shows that, attitude towards English is the strongest predictor, closely followed by attitude towards schooling. The prediction equation is therefore as follows:

$$\text{ENG} = -15.292 + 0.297\text{SH} + 0.00013 \text{TA} + 0.574\text{AS} + 0.718\text{AE} + 0.311\text{TW}.$$

On the basis of these results, the null hypothesis which proposed a no significant contributions of the individual variables as predictors of the JS 3 students' performance in English studies has been rejected for attitude towards English studies, attitude to schooling, study habit, and test wiseness but retained for test anxiety.

Hypothesis two

To verify the second hypothesis of no significant collective effect of the five psycho-academic variables (study habit, test anxiety, attitude to schooling, attitude towards English and test wiseness) in predicting the JS 3 students' performance in English, the multiple regression analysis yielded a coefficient (R) of 0.383 and a multiple R-square (R²) of 0.147 which means only 14.7% of the total variance of students' performance in English is explained by the five variables. The analysis of variance (ANOVA) result for the prediction produced an F-ratio of 29.184 which is significant at 0.05 alpha level. By this significance, it can be interpreted that the collective effect of these five variables can be used to predict or explain students' performance in English studies. By this therefore, the null hypothesis has been rejected.

The result of testing hypothesis one shown on Table 3 reveals that the five psycho academic variables of study habit, test anxiety, attitude to schooling, attitude to English and test wiseness; when taken collectively are effective in predicting students performance in English. The observed F-ratio of 29.184 was significant at $p < 0.05$ level indicating that the effectiveness of the collective contribution of the psycho academic variables in predicting that students' performance in English studies could not have occurred by chance. The level of contribution of these independent variables with the students' performance in English studies is reflected by 0.383 value of the coefficient on multiple regression (R) analysis.

A further study of Table 3 revealed the individual contributions made by each of the psycho academic variables to the prediction. The readings of the t-values of each independent variable showed that three variables namely; study habit, attitude to schooling and attitude towards English of the five variables contributed significantly to performance in English at $p < 0.05$ level of significance, while test wiseness was significant at 0.05 level The significant contribution of study habit to academic performance is a result

supported by previous research studies by Onyejiaku (1989), Isanyedighi (1997), and Idika (2004).

Studies on the effect of attitude has also buttressed the result of this research endeavour, for instance attitude has been found to positively affect students' performance from studies conducted by Freedman (1997), Maduabum (1993), Thompson (2001), and Cuttance (1980). Cross (1981) observed that a positive attitude towards education seems to be contagious, this presupposes that a student with a positive attitude towards schooling will invariably extend this to the different school subjects. This is further confirmed by Ukpong (2000) who opines that attitudes influence students' choices, response, values participation and commitment to educational activities, therefore a positive and significant attitude to schooling will permeate the different facet of the child's school career.

The third variable on the series is test wiseness. Results gathered from the study indicate that test wiseness significantly affects students' performance in English at $P = 0.05$, this result confirms the outcome of previous works by Rogers and Bateson (1991), Andrew (1998), and a Nigeria – based study conducted by Ijeoma (2002) all confirm the significant contribution of test wiseness to students' academic performance. This result is naturally obvious as it easier to have an English test item correct by guessing or by some other test wise method other than actual knowledge of the subject matter.

The psycho academic variable that has the least effect on students' performance in English is test anxiety. Although studies on the effect of test anxiety and English is limited but one from the achieves a research conducted by Taylor and Speace (1963) still affirm a negative effect of test anxiety on English performance. On a more general frontier, studies by Sarason (1984) and Osterhouse (1985) attest to the fact that test anxiety has a negative effective on optimum academic performance.

Summarily it is observed attitude towards English, attitude to schooling, study habit, and test wiseness have individually contributed significantly to students' performances in English studies. These findings emphasize the need for good study habit and a positive attitude to schooling for an all round good academic performance in our students. It is therefore the responsibility of the government, teachers, parents and all stakes holders in the educational sector to put the necessary mechanism in place in order to improve the teaching/learning conditions in our public schools to enable students in these

schools compete favourable with their counterparts in private schools. Teachers and guidance counselors in particular need to educate the students on how to cultivate good study habits in order improve on their academic performance; and parents and teachers should consciously work on their students' attitude towards schools and the different school subjects as this will directly impact their performance in school.

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Table: 1 Reliability results

Variables	No. of items	Mean	SD	Cronbach alpha
Test Anxiety	10	17.15	5.03	0.72
Test Wiseness	10	29.92	2.74	0.59
Study Habits	10	33.46	0.68	0.87
Attitude to Schooling	10	32.61	5.08	0.91
Attitude towards English	10	31.60	4.67	0.77

Table 2: Summary of means and standard deviations of psycho academic variables and English studies performances

S/N	VARIABLE	N	MEAN	SD
1.	Study habit	853	31.92	4.36
2.	Test anxiety	853	17.95	4.93
3.	Attitude to schooling	853	32.72	4.80
4.	Attitude toward English	853	30.94	5.05
5.	Test wiseness	853	28.65	3.54
6.	English studies performance	853	44.10	17.26

Table 3: Summary of multiple regression analysis of the individual and collective effects of the psycho-academic variables to the prediction of students' performance in English studies

Multiple R	-	0.383
R square	-	0.147
Adjusted R square	-	0.142
Standard error of estimate	-	15.99

Source of variation	Sum of squares	df	Mean square	F-ratio
Due to regression	37319.257	5	7463.851	29.19*
Due to residual	216624.47	847	255.755	
Total	253943.73	852		

Multiple R	-	0.383
R square	-	0.147
Adjusted R square	-	0.142
Standard error of estimate	-	15.99

Variables	Unstandardized Regression Weight (b)	Standard Error of regression wt	Beta weight	t
Constant	-15.292	7.487		-2.043
SH	0.297	0.145	0.075	2.05*
TA	0.00013	0.124	0.000	0.11
AS	0.574	0.141	0.160	4.06*
AE	0.718	0.135	0.210	5.34*
TW	0.311	0.159	0.064	1.96*

- significant at 0.05.