

HOME VARIABLES, ATTITUDES AND GENDER CORRELATES OF SECONDARY SCHOOL STUDENTS' COGNITIVE ACHIEVEMENT

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ABSTRACT

This study examined the influence of some home variables, attitudes and gender on secondary school student's achievement. It adopted an ex-post facto research type and used multi-stage sampling and simple random sampling procedures to select three hundred Economic students (148 males and 152 females) in their second year of senior secondary school (SSII). Three instruments were developed for data collection. A t-test, analysis of variance and multiple regression were used for data analysis. The findings of the study revealed that students' home variables, attitudes and gender jointly predicted students' achievement. The study, however showed that students' attitudes and gender separately did not significantly predict achievement in Economics. The findings have implications for cognitive development in students. Further research is needed to examine other home variables not included in the study.

KEYWORDS: Variables, SSII, Attitudes, and Gender.

INTRODUCTION

Although the school operates curricula that spell out the details of activities the learner is expected to go through during the course of learning, and as such the society relies heavily on the school for the academic development of the learner, it is unequivocal that many factors predict students' level of cognitive achievement in school subjects. Educationists, researchers and other stakeholders in education believe that what happens within the school is influenced by many other factors external to the school. Bejah, (1995) and Falaye (2005) assert that many factors influencing students' achievement are outside the control of the classroom teacher.

For instance, attitude, which is the predisposition or feeling people have, either positively or negatively about some social objects or classes of objects (Obemeata, 1984) plays a powerful role in students' achievement as many studies reveal a positive relationship between students' attitudes and their academic achievement (Chacko, 1981; Klausmeier, 1985; Obemeata, 1984; Okoye, 1983).

The pattern of influence gender exerts on learning school subjects has been controversial. Some researchers reported that boys are better than girls in certain subject areas while girls perform better in some others. In a study, Aremu (1999) reported that boys are better than girls in Mathematics and other Science subjects. In other studies, Debor (1986), Granewall (2000) and Toh (1993) found that girls outperformed boys in some other school subjects, while some other researchers found no difference in some cognitive tasks involving both boys and girls (Adesoji, 1999; Ezewu, 1981; Suits & Lagowski, 1994).

Certain characteristics of the home have also been found to impinge on student's learning outcomes. Studies have shown for instance, that there is a relationship between parent's level of education and achievement (Odinko, 2002; Okpala & Onocha, 1985; Umoinyang & Okpala 2001); family type and structure and achievement (Borelson, 1994; Grissmer, Hedges, Larry, & Laine, 1994; Touray, 1982).

Children from literate homes perform better than those from illiterate homes for several reasons. Educated parents encourage their children and wards, and develop in them self confidence and positive attitudes, and act as role models for their children (Umoinyang & Okpala 2001). Literate parents also show more interest in and get more involved their children home work (Jencks & Phillips 1998; Okpala & Onocha, 1985) and motivate them to achieve highly (Okagakia & Frensch, 1998; Wong, 1990).

Further still, it has been ascertained that academically enriching home environment in terms of educational facilities

provided at home is significantly related to high academic achievement (Onocha, 1985). These are closely linked with the socio-economic status of the home. It therefore shows that parents' socio-economic status is highly related to achievement. Bowles and Levin (1988); Idowu, (1991); Okpala and Onocha (1985) and Yoloje (1994) reveal that children from high economic status have advantages over children from low socio-economic background for some reasons. For example, with a relatively high income, such parents are able to provide educational materials that stimulate learning and support the education of their children financially.

To promote better school cognitive achievement, educators and researchers are increasingly suggesting that external factors be identified and considered with a view to determining how effective they can be in promoting learning. The focus of this study therefore is to assess the influence of some student and home factors on achievement.

Statement of the Problem:

This study was designed to assess how students' variables (parents' education parents' occupation, parental supports, socio-economic status, parental interaction, family type; family size, family structure, custodian/guardian and educational facilities available at home), attitudes and gender can predict students performance in secondary school Economics.

Based on the stated problem, this study sought to provide answers to the following research questions.

1. To what extent would students' home variables, attitudes and gender jointly predict their achievement in Economics, and
2. What is the relative contribution of each of the home variables, attitudes and gender (independent variables) to the prediction of students' achievement (dependent variable) in Economics.

METHODOLOGY AND DESIGN

The research adopted an ex-post facto design as none of the variables in the study was manipulated.

Sample and Sampling procedure

The study sample included three hundred (148 males and 152 females) students in the second year (SSII) of the Senior Secondary School Education.

The sample was selected using a multi-stage sampling procedure. Three administrative zones were selected out of the six zones which make up Osun State, Nigeria. Five local government areas were selected from the three

administrative zones. Ten Secondary Schools were chosen, two from each of the five local government areas. The schools were selected on the condition that they had completed the scheme of work in the first year (SSI).

At the school level, thirty students were randomly selected. Their ages ranged from 15 to 20 years, with the mean age of 18 years and standard deviation of 9.80.

Instruments

Three instruments were developed for data collection. They are

- 1 Students' Home Background Questionnaire (SHBQ).
- 2 Students' Attitude Questionnaire (SAQ) and
- 3 Economics Achievement Test (EAT)

The student home background questionnaire consists of six sections (A-F). Section A solicited for personal information on school, school location, gender, age of students, number of father's wives and number of children. Sections B and C covered information on parents' level of education and parents' occupation respectively. Information on the level of parental support was covered in Section D, while additional information on parental support was contained in Section E. The last section F sought for information on educational facilities available at home.

The questionnaire was trial tested on 30 year one senior secondary school (SSI) students from another school not involved in the study. Cronbach coefficient Alpha yielded validity and reliability indices of 0.80 and 0.78 respectively. The students' attitude questionnaire consists of nineteen (19) items to measure students' attitudinal disposition towards Economics. A 4-point Likert scale of Strongly Agree (SA) =4, Agree (A) =3, Disagree (D) =2 and Strongly Disagree (SD) =1

was used. However, items worded negatively were scored in a reversed order. The items were also trial tested on the same thirty (30) students in each of the selected secondary schools. The Cronbach coefficient alpha of 0.77 indicated that the SAQ was valid.

The Economics Achievement Test (EAT) consists of 50 multiple choice items with four options. The Kuder Richardson formula 20 (KR-20) yielded a reliability value of 0.74 for the test.

Data Analysis

Multiple regression analysis was used to analyze the data collected. The analysis was found appropriate to determine the extent to which the independent variables predicted achievement in Secondary School Economics. In addition, it was used to determine the relative contributions of the independent variables to the prediction. While gender influence was ascertained using t-test.

RESULTS

- 1 To what extent would students' home variables, attitudes and gender jointly predict their achievement in Economics?

Table 1: Summary of Regression Analysis of Students' Home variables, Attitudes and Gender as predictors of Students' Performance in Economics.

Multiple R	-	0.283
Multiple R. Square	-	0.080
Adjusted R. Square	-	0.042
Standard Error of Estimate	-	7.2270

Table 2: Analysis of Variance

Source of variable	Df	Sum of Square	Mean Square	F-ratio	Sig.
Regression	12	1303.506	108.626		
				2.080	.018*
	287	14988.690	52.225		
Residual					

*Significant (P<0.05)

The result presented in Table 1 shows that the independent variables (Home variables, attitudes and gender) yielded a multiple correlation of 0.283 with students' achievement in Economics, multiple R square of 0.080. The result shows that a combination of home variables, attitudes and gender accounted for 8% of the variance in students' achievement in Economics as indicated by the co-efficient of determination R^2 . The analysis of variance displayed in Table 2 further shows the value-F to be 2.080 ($F_{(12,287)} = 2.080$) which is significant at 0.05 level. This result reveals that students' achievement in Economics is significantly influenced by the independent variables, meaning that students'

achievement in Economics can be accounted for by the students' home variables, attitudes and gender, and this result was not due to chance.

2. What is the relative contribution of each of the home variables, attitudes and gender (independent variables) to the prediction of students' achievement (dependent variable) in Economics.

The relative contributions of the independent variables of home variables, gender and attitude to students' achievement in Economics are presented in Table 3.

Table 3: Relative Contributions of Home variables, Gender and Attitude to the Prediction of Students' Achievement in Economics

Independent Variables	Std. Reg.	Std. Error	Beta	Sigh T	P Level
Parent Education	8.122E02	060	082	1.351	178
Parent Occupation	-.292	202	-.091	-.446	149
Parent Support	-7.915E-03	014	-.032	-.557	578
Parent Socio Economic Status	.356	166	.118	1.811	042*
Parent Interaction	.202	296	.045	.683	495
Family Type	.235	084	.164	2.807	.005*
Family Size	2.302e-02	100	.014	.230	.818
Family Structure	.562	272	.126	2.064	0.040*
Custodian/Guardian	.503	1.063	.029	.474	.636
Facilities at Home	.119	154	.048	.772	.441
Attitude	9.761E-03	036	.017	.272	.786
Gender	-1.556	.911	-.105	-1.708	.089

*Significant (P<0.05)

The values of the parameter estimates reveal the contribution of each of the independent variables (home variables, attitudes and gender) to the dependent variable (students' achievement in Economics). From the table, family type, family structure and parents socio-economic status had a positive and significant correlation ($P < 0.05$) with students' achievement in Economics as reflected by the beta weights. Of the three independent variables that significantly contributed to students' achievement in Economics, family type ($\beta = 0.164$) is the most potent, followed by family structure ($\beta = 0.118$). The remaining variables show no significant contribution to the prediction.

DISCUSSION

Findings from this study show that students' achievement in Economics is jointly and significantly influenced by home variables, attitudes and gender. The findings corroborate earlier findings on relationships among students' home variables, their gender and attitudes (Adeleke, 1988; Bowles & Levin, 1988; Grissmer, Hedges, Larry & Laine, 1994; Idowu, 1991; Touray, 1982; Yoloye, 1994). When disaggregated, students' attitudes and gender did not significantly influence their achievement in Economics. This finding supports those of Adesoji (1999), Suits and Lagowski (1994) and Adelowokan (1989) who found out that gender does not make any difference in achievement levels of students. However, it is at variance with the previous findings on the influence of students' attitudes on their achievements (Obemeata, 1984; Klausmeier, 1985).

Three out of the ten (10) home variables included in the study, the type of family the students come from, their family structure and parents' socio-economic structure exert a significant influence on students' achievement. While monogamous family may create an environment that is likely to encourage learning, on the other hand, students' from polygamous families may be disadvantaged not necessarily because they are less able to achieve but because the environment in such families may not encourage effective learning. Also, since the family resources have to be shared among family members in a polygamous setting with larger size than monogamous family, children from polygamous families may have little or nothing for their education. Hence, they default in the payment of school fees and other levies and are sent out of school. They attend school irregularly, spend much of their time out of school thereby affecting their performance negatively. In some cases, such students drop out of school for their inability to pay up their school fees.

The family structure in terms of the position of the child among other siblings and the position of his mother among other wives is also a significant factor influencing students' achievement in this study. In families where resources and income are meager, older children are given priority academically and otherwise over other children. With this reason, the more the members of a family the less the academic achievement of the children.

Several explanations can be offered for the significant influence of the socio-economic status of parents on the cognitive achievement of their children and wards as reported in this study. Parent's socio-economic status often determine the type of school the children attend, the quality of food and other materials provided at home (Adeleke, 1988; Bowles & Levin, 1988; Idowu, 1999 and Yoloye 1994). And these impact on their children's academic achievement.

Also, parents with high social economic status are able to give financial support to their children and the children participation in school activities invariably lead to higher performance. This corroborates the findings of Bowles and Levin (1988). Interest of parents with high socio-economic status in education of their children could also make a difference. Such parents regularly motivate their children to learn; as such their children tend to perform better than children from socio-economically disadvantaged homes.

Although, students' attitudes, gender and home variables significantly predict their achievement in Economics,

they jointly account for a low percentage (8%) of the variance in students' achievement. It means that students' achievement in Economics can be traced to other factors not considered in this study. This confirms Phillips (1998)'s finding that parental education and family socio-economic status alone are not good predictors of students' achievement. Additional research is therefore necessary to examine other variables not examined in this study.

CONCLUSION

The findings from this study have revealed the influence students' home variables attitudes and gender exert on their cognitive achievement. Out of the ten home variables included in the student family type, family structure and parents' socio-economic status made significant contributions to the prediction of students' achievement in Economics.

The study also revealed that gender and attitude when combined with home variables contributed to the students' achievement in Economics. However, gender and attitudes of students do not individually predict achievement in this case. These have implications on students' cognitive development and the role of the family in facilitating and enhancing the achievement of the child in school subjects. More attention is needed to improve the socio-economic status of parents by the government and other relevant agencies in order to maximize students' cognitive achievement in school subjects.

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