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The influence of sociological and psychological factors on academic performance of University students

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The title of the study was "the influence of sociological and psychological factors on academic performance of university students. Independent variables such as family socio-economic status, ability, perceived lecturer influence and perceive peer influence were examined in order to determine their influence on academic performance of university students. To guide the research, four hypotheses were formulated, the population of this study comprised of the 2003/2004 university students in year one. A longitudinal design was employed for the study. The university students were stratified in two dimensions, (1) Types of university e.g. public, private, (2) By quality e.g. good, average and poor. All the year one students formed the sample. An attitude test was administered on the students; a questionnaire consisting of sixty items was given to each subject. This was first pre-tested. An achievement scale test was also administered at the same time. During examination period, a test anxiety scale and academic performance was given to each of them, the latter consisted of 56 objective items and a reliability coefficient of 0.95 was obtained through a test-re-test method. The findings were that the dependent variables listed above were significantly related to the dependant variables (academic performance) based on these findings recommendations were proffered.

Keywords: sociological, psychological factors and academic performance

INTRODUCTION

The emphasis given to schooling has probably arisen from three assumptions about the role of education. The first is that education is conceived of as an agency for processing people. This view leads to the analogy of education with the industrial process. Human beings are thus compared to raw materials which can and need to be converted into finished products. By this reasoning, schools are to the education industry what factories are to the manufacturing industry. The second assumption stems from the twentieth century development of the concept of equality of opportunity and the belief in education as the means of achieving it. This was given as

one of the objectives for educational expansion in Nigeria. This objective is restated in the National Policy of education (2004). Historically, however, equal educational opportunity in whatever degree this exists has not yet overcome the effect produced by unequal access to power and all education systems tend to promote the interest of those so wield power in the society. The third assumption is that education would help in reducing skill constraint by providing knowledge, understanding and competencies required for the production of various levels of manpower. The indigenization of high level manpower, it is thought, would

reduce national dependence on foreign governments and nationals. The various educational tasks, it is also assumed, can be accomplished mainly by schools (which lead to the confusion of education with schooling). Schooling has come to enjoy a prestige and legitimacy out of all proportion to its educational importance since it now monopolizes the available resources of manpower and money. Given this set of general assumptions stated above and the proportion of scarce resources allocated to education, it have been stated that the high proportion of the University students who spend their school years with little or no educational involvement is a luxury the contemporary Nigerian society cannot afford (Ohishola 2000). This raises the question about the nature of outcomes of schooling and the extent to which various characteristics of performance in the student role are related to various types of performance called for in a wide range of contexts within society. The intention of this paper is to provide an understanding of the process of schooling at the university level. If the governments of any nation at various levels are going to respond to the pressures for school reform, there is need to understand the process they seek to modify. Before embarking upon the enormous tasks of expanding education at all levels, developing curricula that are more realistic and relevant to a nation's present and future needs as well as improving the input into schools, we need to have information that is very precise indeed. This information should be systematically collected for a considerable length of time on the basis of sound theoretical rationales. This study is thus designed to fulfill this purpose through painstaking and sustained efforts. The fundamental questions addressed are these:

1.   What are the social and personality characteristics of university students that are most impor-tant for academic success?

2.   What are the relative contributions of social and personality factors to the prediction of academic success of the Nigerian University students?

To answer these questions, a pilot study was designed, that will enable the researcher to document the characteristics of students in their first year of admission to the university and observe the dynamic processes which impinge on the development of these students.

Theoretical Framework

The majority of the studies to date seem to indicate that further investigation is required to unravel the complex determinants of academic performance. Most of the sociological studies found that children from lower socio-economic status backgrounds, on the average, perform less well academically than those from middle and upper socio-economic status levels. The lower socio-economic status students have been found to be less motivated for school achievement and are likely to have lower-

occupational aspiration than their higher status peers (Sehal, 2000, Spend 2003). These results emanate from the kinds of parent-child interaction which build into the child's personality the desire (or absence of desire) to perform exceptionally well in the academic sphere. On the other hand, attention has been directed to the kinds of distinctions that should be made, for example, the distinction between performance at the cultural and social group level which specify the goals towards which performance must be directed (Kahl, 2005).

The interpretation of this latter view is that members of lower socio-economic status may have higher educational aspiration than some in the upper socio-economic status who feel they have already "made it". But, because the former are oriented toward lower social group goals, they do not become socially mobile. Applying, this to the Nigerian context the differences in the performance may be complicated by differences in the ethnic group norms.

Compared with the family, the school has been found to be less important in explaining the variation in academic performance. In other words when the effect of the family is partitioned from the variance explained, what can be attributed to family background. However, the obverse of these generalizations has been found to be valid for non-Western cultures (Sydney 2005). The role of the school in non-Western cultures is qualitatively different from that of the family. It thus becomes understandable that the length of membership of individuals within the school organization will affect the behaviours of such individuals.

If the influence of the family and the school are mutually reinforcing, it is not so clear how personality factors are related to both the family and the school social structures. However, psychological research has found that some measurable aspects of the personality, namely extraversion - introversion, anxiety (neuroticism) and motivation are related in certain ways to academic performance. It could thus be argued that if X (family background) is related to Y (academic performance), if Z (school factors) are related to Y (academic performance), if W (personality factors) are also related to Y (academic performance), and if X and Z are also related, then W must be related in some way to X, Z. The task for research is to discover this pattern of relationship. Since sociologists and psychologists have been encapsulated in their different fields, the task of linking social structure with personality and behaviour has hardly been broached. After reviewing most of the studies done on the prediction of academic performance, Afeto (2006), came with the conclusion that any theory that would have utility in explaining, variations in academic performance must show the influence of the relationship between social structures and personality on behaviour without making the error of psychological sociological reductionism. The general conceptual model is used in this study.
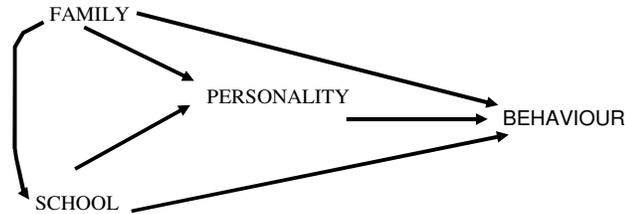
Fig 1: Skeletal conceptual model for relating social structures, personality and behaviour
Source: Olusola Avoshe (1985)

Table 1: Scheme for Relating Family, School, Personality to Academic Performance

INDEPENDENT VARIABLES	INTERVENING VARIABLES	DEPENDENT VARIABLES
• Socio-Economic Status (FAMILY) • Ability • Perceived lecturer influence • Perceived peer influence	• Perceived Parental Encouragement • Intellectual Curiosity • N-Achievement • Test Anxiety • Degree of Integration • Perceived lecturer influence • Perceived peer influence.	ACADEMIC PERFORMANCE

The discussion of substantive issues above suggests that one can specify the elements of two complimentary sociological theories as well as elements of the personality theory into one general conceptual model. The two relevant sociological perspectives are socialization theory and reference group theory. The major concern throughout will be to relate social structural systems and personality to behaviour (which in this case is academic performance).

The central postulate in the theory of socialization is that certain structural arrangements lead to predictable behavioural outcomes through the process of internalization on the part of individuals being socialized and through the manipulation of the reward system on the part of the agents of socialization. But variations in the competence of both parties and within the social structure will (and do) lead to variations in socialization outcomes. In this case the family, the school, the community and the peer group constitute the structural contexts within which individuals function.

But the theory of socialization alone cannot account for all the variance in academic performance. For example, how do we account for children raised in collectivities based on rural economy taking on the characteristics of individuals raised in industrial, urban environment? The Reference Group, Theory postulates that individuals, in social locations, behaviour with reference to the expectations of others (Marriot 1993, Kitty 1963) further developed the reference group concept by emphasizing that individuals use their perceptions of others as frames of reference for subjective self-assessment, attitude formation and behaviour and that these others need not exist in any primary relationship to the individual (Avoshe 1985).

These two perspectives show the influence of the structure of interpersonal relationship on the structure of personality. Allport (1993) state that "personality is the dynamic organization within the individual of those psychophyxical systems that determine his characteristic behaviour and thought". The assumption underlying this research is that personality development is not possible outside human groups. These human groups provide norms which orient individuals to group goals. The theoretical status of personality variables in this study is that they provide the mediational contexts between the social structures and behaviour (see Figure 1).

This general model summarizes the pattern of relationship discussed so far, at the conceptual level. Each social structural or personality domain constitutes a complex pattern of relationships whose dynamics can only be represented in an oversimplified form. However, our previous discussions of relevant theories suggest the kinds of hypotheses that may be generated. First, there shall be a presentation of a scheme for relating the different aspects of the model (see Table 1). Then hypotheses shall be formulated, not to test the model, but as a heuristic device for manipulating the data.

Hypotheses

1.   There is no significant relationship between the social-economic status of parents and the academic performance of students.
2.   There is no significant relationship between the level of ability of students and their academic performance.
3.   There is significant relationship between peer group influence and students academic performance.
4.   There is no significant relationship between lecturers influence and academic performance of students.

METHOD OF STUDY

Sample

Data for this study were collected during 2003/2004 school year. A longitudinal design was employed for the study thus the sample for the study was drawn from the population of year 1 students of the university.

These were stratified on two dimensions:
(1)   Type of university e.g. public, private.
(2)   By quality, i.e. good, average, poor.

For each school selected, all the year 1 students were included in the sample. Since, the study is longitudinal; it will be easier to keep track of all the cases in the sample. Before beginning of the school year, a battery of aptitude tests was administered on the students. This exercise involved some test administrators. Questionnaires' consisting of 60 items was given to each subject. This was first pre-tested in two schools outside the study population after which it was refined before it was used. An achievement scale test was also administered at the same time. During the examination period for each of the schools in the sample, a test anxiety scale (TAS) was given to each of them as well as an academic performance test (APT). The latter consists of 56 objective items and a reliability co-efficient of .95 was obtained through a test-retest method using year one classes in Lagos. Adequate security measures were taken to prevent leakage. Of the original university respondents of 2000 complete information on all items was obtained on 1950. Thus a response rate of over 97% was obtained.

Operational Definition and Measurement of Variables Entered into the Academic Performance Model

The following variables were entered into the regression model.

Socio-Economic Status: (SES. An index of SES was computed from weighted scores on education and occupation of both parents using a four-point scale for each indicator.

Ability: In the absence of I.Q. tests, Tests M were administered at the beginning of the 2003/2004 school year. These tests were developed at the Institute of Education, University of Lagos for use as Intelligent Test (Vabaza, K.T. 2004).

Academic Performance: This is viewed as how well an individual has done cognitive and non-cognitive tasks. This is to be distinguished from Academic Achievement which refers to number of years of schooling. While the former refers to the qualitative aspects of schooling the later is concerned with the quantitative aspects. This variable was measured by using Academic Performance Test (APT). This Test consisted of 50 multiple choice objective items on English, Mathematical reasoning, Science and General Knowledge. Each item was constructed to test attitude or the kinds of performance that will be required of persons with knowledge in each of the basic areas specified above.

Intellectual Curiosity: This variable was used by Banks and Finlayson (1973) in their study of academic achievement in some English Schools. It is measured by finding out the reading habit of respondents — for example the number of books read apart from prescribed texts, the number of hours spent on reading and the degree of interest in diversionary activities.

Parental Encouragement: Refers to a wide range of efforts parents make to help their children to participate meaningfully in scholaristic activities. These include providing direct and indirect help in the performance of school assignments, the creation of optimal conditions in the home for learning and interest in discussing with children how far in school they should go.

Peer Group Influence: Peer groups create for individuals a desire-or lack of desire -to excel in academic tests by setting group norms for academic performance and achievement goals. The questionnaire items used asked for the intensity of interaction of the individual with his peers, the quality of the interaction and the subject-matters frequently discussed.

Lecturer-influence: This is a measure of the perceived interest lecturers showed in individual students in terms of encouragement to participate in lessons and in allowing student- initiated discussions.

Extraversion: The characteristics of typical extravert is that he is sociable, likes parties and needs to have people to talk to. He does not like studying by himself, often sticks his neck out and is generally an impulsive individual. This variable is measured by questionnaire items which call for responses on these dimensions. A summary score was computed for each subject. This is a personality variable.

Achievement: The need to achieve is used here as a personality trait, that is as a motivational need. This variable is measured by the Achievement Scale which was adapted from Gough (1953). The items are characteristics of successful students but are to some extent found to be independent of intelligence. Forty such items were selected from a pool of .64. After a pilot test, 25 items were finally selected.

Anxiety (Neuroticism): Some studies tend to link anxiety with neuroticism. Characteristics of neuroticism and unnecessary worrying, feelings of restlessness, moodiness and general nervousness (see, for example, Entwistle, 1972). This personality variable is measured by a Test of Anxiety Scale adapted from Vabaza's study (Vabaza, 1974).

Of all the variables defined above, the Academic performance variable is used as the dependent variable. The others are regressor variables. Two types of analysis were used. Correlation and multiple regression. The

Table II: A matrix of zero-order correlation among dependent and regressor variables

		1	2	3	4	44	5	56	67	8	9	10
1.	Academic performance											
2.	Ability	.62-										
3.	N-Ach.	.40	.38-									
4.	Test Anxiety	-.23	-.22	-.48								
5.	SES	.42	.30	.29	.19-							
6.	Intellectual curiosity	.12	.09	.08	.03	.26-						
7.	Parental encouragement	.06	.05	.03	.07	.21	.80					
8.	Degree of integration	.06	.05	-.13	-.03	.13	.49	.53	.46			
9.	Peer influence	.05	.05	-.03	.13	.49	.53	.46				
10.	Lecturer influence	.07	.11	.13	-.04	.15	.48	.52	.46	.67		

Table III: Prediction of academic performance, regression analysis

VARIABLES	B	F-SCORE
Ability	.63	159.841
SES	.45	90.520
Degree of integration	.18	5.211
Peer influence	-.30	6.540
Lecturer influence	-.08	0.630
N-Ach	.41	150.108
Intellectual curiosity	.13	2.372
Parental encouragement	-.09	0.935
Test anxiety	-.27	17.262

P .001   P.05

scores on four of the variables, namely ability, academic performance, Achievement Scale and Test of Anxiety Scale were normally distributed as shown by the histogram.

DATA ANALYSIS AND RESULTS

The zero-order correlational analysis will be discussed first by looking at the correlation matrix presented in Table II. These results will be considered with the hypotheses generated.

The most interesting result in this bivariate analysis is to be seen in the magnitude of the correlation coefficient within each variables-set and the low magnitude between the variable-sets. For example, the psychological variables are highly intercorrelated and so are the socio-logical variables. But there is some degree of independence between each set. However, SES is moderately correlated with both sets. These results seem to suggest a strong influence of the family social structure on the development of the personality of the individual and also in providing environment that could facilitate or inhibit academic success.

With regard to the relationship between the dependent variable (academic performance) and the exogenous variables, ability (r=.62), N-Ach (r=.40), SES (r=.42) show considerable strength. The negative relationship of test anxiety with academic performance (r=.26) seems to support the findings in other studies that higher levels of test anxiety are debilitating to academic performance.

The magnitudes of the relationship of other exogenous variables are miniscule, though positive.

The intercorrelations among the exogenous variables show high degree of multicolinearity. Intellectual curiosity is highly correlated with parental encouragement (=.80) degree of integration (r=.58), peer influence (r=.49) and Teacher influence (r=.48) While anxiety has a moderate negative relationship with most of the other exogenous variables, the strength of the negative relationship with N-ach is the highest (r=.42). This result suggests that individuals who are functioning at a low motivational level are likely to have a high level of test anxiety. Parental encouragement has a very strong positive relationship with degree of integration (r=.68), peer influence (f=.53) and teacher influence (r=.52).

Regression Analysis

In order to go beyond these bivariate relationships, regression co-efficient were computed. Table III shows the relative influence of each of the regressor variables in the prediction of academic performance. There is a general agreement between the result of correlational analysis and the regression analysis that ability is the best predictor of academic success. Not only is the regression coefficient very high but the F-ratio indicates that in 99.999 per cent of the cases, this prediction does not occur by chance. The influence of family background is the second strongest variable and it is significant at .001 level. This is very important since SES is only third

in rank when we considered bivariate relationship. N-ach is still very important and significant.

The predictive strength of test anxiety and the direction of influence are consistent with the results of the correlational analysis. The negative predictive value of peer influence, lecturer influence and parental encouragement are very surprising. It is, however, important to report that the influence of N-ach., anxiety, ability and parental background, as reported in literature, has been validated by this study. In a group of university students with an average age of 18.5-19years, individuals who tend to be academically successful have high ability, SES, N-ach but low level of anxiety (refer to tables).

DISCUSSION AND CONCLUSION

Results reported in this paper and supported with tabular presentations need be elaborated upon further in relation to the state of theory, methodology and substantive issues. The substantive issues must be seen in terms of our stated assumptions about the role of education which could have implications for policy formulation.

First, the theoretical issues relate to the linkages between sociological and psychological variables. There is evidence here that the family social structure is still very important in providing the characteristics that are needed to succeed in school. When the results of the data analysis are examined it was found that the personality variables are even more strongly related to SES than the variables which emanate directly from the family social structure which are of immediate critical importance such as, intellectual curiosity and parental encouragement. The formations of personality traits are assumed to be due to the structure of interpersonal relationships. The contention here is that this personality formation is not possible outside human groups. They (i.e. human groups) provide the frame of reference. The hypotheses are formulated to enable one to explore the linkages between social structures and personality in predicting levels of academic performance. The matrix of correlation coefficients suggests that this linkage should be seen as areas of overlap among conceptual systems and the family social structure acts as the point of articulation between these conceptual systems. There is a significant relationship between social economic status of parents and the academic performance of their children.

The methodological problem raised relate to the issue of multicolinearity. This is believed to account for the small amount of variance in the dependent variable explained by the regressors (r^2 = .35). This problem can be solved by commonality analysis which will enable one to partition out unique and common contributions to the explained variance.

The substantive issues raised by this investigation are important for the evaluation of policies on education.

Many new nations have ambitions programmes of educational expansion. Some of the assumptions underlying such programmes have been stated earlier on. The relationship between economic or political development and educational development is more complex than was thought about not too long ago. From this study, it is realized that mass expansion of schooling would not reduce factitious differences among students (see Avosen, 1976, Blau and Duncan, 1967, Foster, 1991). One of the factitious differences is found in the family background which also influences the quality of schools which individuals attend. So the question raised is concerned with the kinds of social influences which act on successful students to which unsuccessful students are not exposed.

To the extent that the present social and economic relationships among and within social groups are not drastically changed, any amount of changes within the school will amount to mere tinkering with the system. To support this contention, the conclusion arrived at in a study- of the Dutch and Swedish educational systems by Ivonsevich (2007) is that inequality of educational opportunity has not diminished appreciably after many years of educational reforms in both countries.

This study challenges the findings that family background is not as important as school factors in African socio-structural contexts. Such a finding is an artifact of the research design since some of the studies are concerned with performance in the final year of schooling. This baseline tends to focus on students who have acquired some degree of homogeneity.

In every society, schooling develops as the typical form of the organization of learning. But as Professor Alberto Granesi observes "The problem of deciding whether 'Schooling' constitutes a valid form of the organization of learning cannot be resolved solely in terms of logic but also by empirical proof. (Avose 2007).

Implications for Stakeholders

The educational manager is being blamed when the school is not performing to expectation; the school is rated according to the success rate of the students in their academics. The public is increasingly asking questions about the decline in academic growth and moral standards of the products of our nation's schools. There is increase demand for efficiency and accountability in teachers professional tasks, based on these facts on ground the educational managers has the onus task that has been mandated to them to manage the school effectively and efficiently to bring about sound quality education and consequently, the development of the nation.

The above study clearly supports that there is a significant relationship between the sociological and psychological factors stated in this study to the academic

performance of students based on this information therefore, parents can be encourage through outreach programs such as seminar, workshop, conferences, these forums are to educate parents, lecturers, students, guidance, counselor and policy makers properly on findings like these ones in this study, this will help to enlighten them and bring about better result in the school system.

The educational managers must do everything possible to bring out the best in their students; this will eventually lead to a better society. Lecturers are expected to do their best in their responsibilities as professional teachers. Parents are expected to provide the needs of their children not only at home but also in school. The guidance counsellor as a professional should help to guide students in their right path morally and academically. They should be seen to be doing a lot for students in terms of getting to know the students better and applying their professional skills to help them. There professionals must get hold of studies like this one to be able to learn more about their students and apply the findings and recommendations practically. Students should be more alert to their studies and beware of negative influences from peers. Policy makers need studies like this one to help them make sound educational policies, government or representatives must provide the needed facilities and environment conducive for learning in schools.

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