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Effects of Parental Involvement on Students' Attitude and Performance in Science

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Abstract: This study examines the attitude of students towards Biology and Chemistry. There was also a focus on the parental involvement. This research was set out find out how parental involvement influences students' attitude towards and performance in the two science subjects. An attitude questionnaire developed and standardized by the researcher was used. It's split-half reliability coefficient yielded 0.59 and 0.51 for Biology and Chemistry, respectively. Three hypotheses were raised and tested. The result obtained using chi-square analysis revealed that the status of the home has implication on school learning and that performances of students in science is a function of their attitudes to the subject. The phenomena observed were discussed in the light of prevailing conditions in most of the developing West African countries. Conclusively, home influence can be a tool to enhance school learning.

Key words: Parental involvement, students, attitude, science

INTRODUCTION

Home influence can be identified as very important variable that have potential for promoting directly or indirectly student academic achievements (Fehrmann *et al*., 1987; Blooms, 1984). The term parental involvement has been given different meanings. It has been used to mean parental expectation of school performances (Hess *et al*., 1984; Seginer, 1983), deliberate effort by the home to reinforce improved academic performance (Fehrmann *et al*., 1987; Fontana, 1981; Karraker, 1972), general academic guidance and support (Blooms, 1984), students perceptions of the degree to which their parents influence their plan for high school and monitor their daily activities and school progress parental influence as determinant of attitude towards learning and so on.

Aghenta (1982) identified four major factors responsible for poor performances in science subjects. These are:

- Teacher related.
- Pupil related.
- Authority related.
- Subject content related.

This study looks into parental influence on the attitude and academic performance among post primary school students. In spite of, the fact that observable attitude of the student have been produced by combination of variables, as earlier mentioned, it is possible to identify the effect of home influence on attitude, enrolment and performance in science. If this psychological construct called attitude, having been mentioned as one of the three main factors affecting performance in science (Pearson *et al*., 1982: Aghanta, 1982), it is important to find out if there is any relationship between it and parental influence. Can positive influence from parents and interested members of the public help to produce enough science-oriented students to read science based courses and provide manpower in the new science areas of science based occupations?

Attitude is a concept, which arise from the attempt to account for the observed regularities in the behavior of individual persons, the quality of which is judged from the observed evaluative responses one tends to make. An individual can show positive or negative attitude towards a particular object, subject or idea. Due to the great influence of attitude on educational pursuits, it is worthwhile to identify the determinants of attitude towards a particular object, subject or idea, the chief which are hereditary factors, body, state, direct experience and communication. Hereditary factors (i.e. inheritance from parents) form the basis of all human activities including developing of attitude as well as learning. Sometimes unconsciously parents and guidance through non-verbal communications transfer their fear likes and dislikes to children via bodily movements and facial expression.

Direct experience by learners is one of the most important determinants of attitude. Parents/guardians need to influence their children by increasing familiarity in the science subject, taking interest in their school work, enroll them for extra lessons, ensuring that home work is done, acquire film and other electronic material that can stimulate their interest in science based careers and enable the children to develop friendly attitude towards the science subject. These experiences are effective in removing hostility towards schoolwork. The effectiveness with which parents are able to motivate their children to learn science by enhancing their home and school learning environments is a function of their socio-economic status. The fact that there is a positive relationship between socio-economic status of parents and the academic progress of their children established by Lee and Croninger (1994), Willms (1986) Sui-chu and Willms (1996), Oluwatelure (2008).

Our modern society is faster paced, globally networked, technologically oriented and requires workers who can problem solve and think critically. The Americans believed that poor ability in science, mathematics and technology will certainly hamper their leading role in the global village. Knuth *et al.* (1991). Hence the initiative that lead to the creation of a community-based collaborative approach, involving the family-school-community partnership, to establish after school programme, which was meant to improve the whole child. The unproductive attitude of students needs to be reinforced through collaborative efforts of parents/ guardians, communities and the school. Parents, irrespective of their social class, are important stakeholders in the education sector and can actually challenge the incompetent nature of science teacher, the lack of commitment and the slow national approach to science education reform.

Statement of problem: Vast majority of parents are finding it more and more difficult to make a living, especially in developing and underdeveloped countries; scarcity of food especially due to its diversion to the production chemicals, drugs and ornaments present enough reason to be distracted from the expected monitoring in various aspects of children's life. The challenges of single parenthood, family crises and the ever increasing involvement of women in various areas of community and national development makes one to ask questions as to whether parents are still able to be committed to their wards; or whether they are putting enough efforts towards effective learning of science among children.

This research work therefore seeks to find out the extent to which parents have been able to objectively use their position to enhance academic progress in their children.

Purpose of the study: If parental influence becomes exerted on pupils through inheritance and communication and by providing right and stimulating environment, the main focus of this research is therefore to find out if there is home/social class advantage. In other words, this study was geared towards finding out if positive attitude as well as greater academic progress of students from the higher socio-economic class will be better than their counterparts from lower society class.

Research hypotheses: The following hypotheses were raised to guide the study.

- There will be no significance difference in the attitude score of respondents with respect to their social economic status.
- There will be no significance difference in the performance of respondents' respect of their socio-economic status.
- There will be no relationship between attitudes and academic performance of respondents.

MATERIALS AND METHODS

Four hundred and sixty subjects randomly selected from 4 secondary schools stratified proportionately into rural and urban in Ekiti State, among the final year student offering science.

Instruments/administration: An attitude questionnaire designed and standardized by the researchers (split half reliability coefficient 0.59 and 0.51 for Biology and Chemistry, respectively) was administered to determine the attitude of senior secondary school student towards the two of the science subject namely: Biology and Chemistry.

The questions items in the questionnaire were designed in such a way as to sieve out the exert opinion of the respondents towards the following matters:

- Interest or enjoyment of the subject.
- Perception of the subject.
- Perception of value of subjects (i.e. usefulness).
- Assessment and performance (i.e. ability).
- Attitude towards teachers teaching the subject.
- Attitude towards content of the subject.
- Outside pressure (i.e. Home influence).
- Attitude towards self (i.e. positive or negative relation to subject).
- Fear and anxiety.

The question which were responded to under home influence were related to:

- Extra lesson/home work.
- Occupational/status of parents.
- Educational level.
- Possession in the home.
- Leisure.
- Time spent on domestic and commercial affairs.

Thirdly, information concerning the individual performance of respondent was obtained from their continuous assessment record of the school subject concerned (i.e. Biology and Chemistry).

Scoring: The instruments administered were collected back and each of them was scores in three parts. The items under home influence were scored separately and summed for Biology and for Chemistry, respectively.

Analysis: The data obtained were analyzed using chi-square statistics and Pearson product Moment correlation coefficient.

RESULTS AND DISCUSSION

The phenomena as revealed the Table 1-4 of results, in Table 1 there was a significance difference in the attitude of respondents towards biology and chemistry with respect to their socio-economic background. Also, there was a significant difference in their performance in the two subjects with respect to their socio-economic background. In other words, the hypothesis of no difference was rejected, at 0.05 level of significance.

In addition, there was a high level of dependence between attitude and performance among the three categories of learners. Parents, irrespective of their social class would want their children to succeed in school learning and want their children to take up career that will enhance their placement in the future. The outcome of this research work revealed that this expectation may not materialize. Similar studies carried out among student in the advanced countries of the world such as United States of America, Britain confirm this phenomenon (Fehrmann *et al*., 1987; Williams *et al*., 1982; Pearson *et al*., 1982; Kenny, 1979).

Although, the extent of parental involvements were categorized into three with reference to socio-economic status, we know that in true life situation, the social class stratification has given a way to what can be likened to a broad based pyramidal system in most of the developing countries of the world including Nigeria.

The reason for this is very obvious. The political instability and economic recession has made the standard of living to fall so much resulting into a collapse of the upper, middle and lower classes. Therefore, very few are privileged to live in affluence while others are wallowing in poverty and wants of the necessities of life. Many take up odd jobs to earn living.

The implication of this to the study is that the true upper class has no opportunity of been included into this samples. Hence, the 'upper class' or 'high socio-economic level' refers to the elites.

Another reason for the observed limitation among the subject sampled is that they are taken from government-established schools. These schools lack proper funding and necessary facilities, equipments and several opportunities, which characterize the privately owned colleges. In other words, the true upper class students are either trained in the schools of international standards or in overseas countries.

Parents who are elites influence schooling of their children and train them to accept their roles at the 'top of the class' economy, parents who are less privileged place their sons and daughters into groups or tracks which encourage conformity to external rules and authority and learn the skill associated with manual work.

Worse still are the petty traders, peasant farmers and local craft man. Their lukewarm attitude towards school learning is transferred to their children. Their children are not encouraged to go into private lessons promptly and regularly. It is therefore, difficult for there children to make meaningful academic progress.

The information obtained in the research revealed that very low occupational status, possess very little or no western type of education; they have very little income and lack such properties as good books, electronic gadgets like video layers, satellite dish, internet connections, computers, films and films projectors and so on.

Table 1: Two by three chi-square distribution of Attitude and Performance of respondents in biology

				(0-E)		$(0-E)^2$		$(0-E)^{2E}$	
Variables	Attitude	Performance	Total	A	P	A	P	A	P
High SES	280	280	520	120	80	14,400	6,400	90	40
Middle SES	160	160	280	-40	0	1,600	0	10	0
Low SES	80	80	160	-80	-80	6,400	6,400	40	400
Total	480	480	960	960			E(0-E)/E	=	220

(2-1) (3-1); df = 2 = 5.99 < 0.05 level of significance, hence the hypothesis of the independence is rejected

Table 2: The two by three chi-square distribution of respondents' attitude and performance for chemistry

				(0 – E)		$(0 - E)^2$		$(0 - E)^{2E}$	
Variables	Attitude	Performance	Total	A	P	A	P	A	P
High SES	276	216	492	116	56	13,456	3,136	84.1	19.6
Middle SES	120	164	284	-40	4	1,600	16	10	0.1
Low SES	84	100	184	-76	-60	5776	3,600	36.1	22.5
Total	480	480	960	960		E (0 - E)/E		=	1724

Df = 5.99<0.05 level of significance; hence the hypothesis of the independence is rejected

Table 3: Correlate between parental influence and performance in biology

N	df	r	Level of significance	Table value
200	198	0.68	0.05	0.138

r = 0 is rejected at 0.05 level of significance

Table 4: Correlate between parental influence and performance in chemistry

N	df	r	Level of significance	Table value
200	198	0.65	0.05	0.138

They hardly influence their children to get involved in activities, which can stimulate them for academic attainment such as excursion, visits to museum and theaters. Instead, their children engage in domestic works, commercial affairs and apprenticeships, with their leisure restricted to moon light games only.

Table 3 shows the result of the correlate between parental influence and performance of respondents in Biology, while Table 4 illustrates the parental influence as a correlates of performance in Chemistry. It is clearly suggested that there is a positive relationship between these two variables.

In other words, a greater academic progress can be achieved by students if there parents becomes conscious of the fact that there is a lot they can do to bring to reality their goals and aspiration for their children.

CONCLUSION

From this study a statistically significant difference was observed in the attitude of students with respects to their socio-economic levels. Also a statistically significant difference was in the performance of student with respects to their socio-economic levels. Performance in schoolwork was a function of the type of parental influence. Most government established schools orient students into middle class roles.

RECOMMENDATIONS

In view of the importance of parental involvement to academic progress, it is important that school authorities should seek for means of ensuring that the attitude of parent and guidance are influenced positively towards assisting the students, so that they in turn can put in their best in their school work.

Also, parents should be made to realize the importance of science learning to the individual (i.e. scientific literacy) and to the society (technological advancement).

School authorities need organize programs that will bring about parents, teachers and student interaction. This will create a forum for discussion. In this manner, parent will know what they are expected to do to complement teachers efforts and vise versa. School also need to make such programmes attractive to parents.

REFERENCES

Aghanta, J.A., 1982. Why there is not enough science applicants for university admission in Nigeria. The J. STAN. Ilorin, 2: 90-99.

Blooms, B.S., 1984. The search for the method of group instruction as effective as one to one tutoring. Edu. Leadership, 41 (8): 4-17.

Fehrmann, P.G., T.Z. Keith and T.M. Reimers, 1987. Home influence on school learning: Direct and indirect involvement on high school grades. J. Edu. Res. N.W. Washington, 80 (6): 330-337.

Fontana, D., 1981. Psychology for professional groups. Psychology for teachers London: Macmillan press.

Hess, R.D., S.D. Halloway Dickson and G.G. Price, 1984. Material variables as predictors of children school readiness and later achivement in vocabulary and mathematics in 6th grade. Child Dev., 35: 1901-1912.

Karraker, R.J., 1972. Increasing academic performance through home managed contingency programs. J. School Psychol., 10: 173-179.

Keith, T.Z. and E.B. Page, 1985a. Homework and School National evidence for Policy change. School Psychol. Rev., 14: 351-312.

Kenny, D.A., 1979. Correlation and Casualty New York: Wiley.

Knuth, R.A, B.F. Jones and S. Baxendale, 1991. What does research say about Science. http://www.ncrel.org/Oak Brook.

Lee,V.E. and R.G. Chroninger, 1994. The relative importance of home and school in the development of Literacy skills for middle grade students. Am. J. Edu. Univ. Chicago Press, 3 (102): 286-329.

Oluwatelure, T.A., 2008. Evaluation of scientific literacy among Nigerian university undergraduates. An unpublished PhD thesis. University of Ado-Ekiti. Nigeria.

Pearson, J.E., T.F. Adler and C.M. Kaczala, 1982. Socialization and achievement attitude and beliefs: Parental influences. Child Dev., 53: 310-321.

Seginer. R., 1983. Parental educational expectation and child's academic achivement. A literature review. Merrill Palmer quarterly, 29: 1-23.

Sui-Chu, H.O. and J.D. Willms, 1996. The effects of Parental involvement on Eighth Grade Achievement. Sociol. Edu., 69:126-41.

Williams, P.A., G.D. Haetel and H.J. Walberg, 1982. The impact of leisure time television on school learning. A research Synthesis. Am. Edu. J., 19: 19-50.

Willms, J.D., 1986. Social Class Segregation and its Relationship to Pupils' Examination Results in Scotland. Am. Sociol. Rev., 51: 224-41.