

## ASSESSMENT OF THE FACTORS AFFECTING THE STANDARD OF EDUCATION IN JUNIOR SECONDARY SCHOOLS IN THE KASSENA-NANKANA DISTRICT IN THE UPPER EAST REGION OF GHANA

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### ABSTRACT

*Positive relationships have been found to exist between factors like family size, parents' educational levels, parents' occupational statuses, ability of parents to pay school fees, and the concern parents show in their children's education and academic performance. This research tried to find out whether the above findings hold good in the Kassena-Nankana district by examining the relationship between the above named factors and pupils' performance in Junior Secondary Schools (JSS). Personal interviews using questionnaires was the main research instrument. A total sample size of 14 Junior Secondary Schools, around 140 households and some officials of the district education directorate was used. The selection was done through random sampling.*

*The study revealed that in the district, positive relationships exist between the above named factors and pupil's academic performance. There is therefore the need for the government and all other interested parties to take pragmatic steps to put mechanisms in place in order to remove all the problems relating to the above factors in the district. It is hoped that this will help raise the academic performance of pupils vis-à-vis the standard of education in the district and the country as a whole.*

**Keywords:** *District, standard, education, and academic performance.*

### INTRODUCTION

Formal education is one key institution which human society has established to ensure its survival and continuity. Education prepares, trains and orientates the youth for growth, development and participation in national development. It is an important and strategic key to development with the basic purpose of producing a population which is functionally literate, knowledgeable and productive. It helps people to acquire knowledge and develop new skills through new ideas in order to bring about innovation.

The New English Dictionary on Historical Principles defines education as the action or process

of drawing forth, eliciting or developing (humans or animals) from a state of latent, rudimentary or potential existence. This means that education has the ability to unearth hidden capabilities in people who go through its processes.

When such capabilities emerge, they are manifested in skills displayed by the educated to produce goods or services that are consumable. Such a view indicates that the main function of education is the training of the youth for a new culture of the future. Scholars, are however, not agreed on the meaning of education but a common factor agreed upon by all is the idea of developing desirable qualities in the people educated. Theodore Schultz (1961) described education as "an investment in human capital" (p.19)

in an influential presidential speech to the America Economic Association in 1960. Peel (1956) and Castle (1966) see education as a life-long process and therefore view education as what prepares an individual for the life that he leads. Aristotle and Locke are those who see education as a means of promoting character training. Locke (in Curtis and Boulwood, (1953) in his "Essay" observed that "because our faculties and abilities can develop in any direction, it is important to ensure the exercise only of those powers which give us skills in the 'right' direction" (p.236).

Aristotle, on the other hand, in his "Ethics and Politics" (again cited in Curtis and Boulwood 1953) observed that "one's moral life only has meaning when the different relations in which the individual stands to his fellow men are considered" (p.35). Bagley (1915), Dewey (1916) and Thompson (1981) are among those who regard education as a form of socialization. Thompson observed that societies since time immemorial have sought to develop appropriate behavioural patterns to spread the possession of knowledge and understanding among their members through education. He observed that Anthropologists refer to such practices as socialization and enculturation whereby an individual is incorporated into a group and made capable of behaving in the ways expected by the society. Dewey wrote that education helps to maintain the social continuity of life by transmitting from generation to generation the cultural and normative heritage of a society.

Adams (1912) and Joad (1945) are among those who regard education as a means of earning a living. In his book, "The Evolution of Educational Theory" Adams states that there are two types of education. "One that should teach us how to live and the other how to make a living", (p.42). Joad argues that a society should not only give general education to its people but it should also give professional training such as

medicine, ploughing, trade, law and engineering to the people. By so doing the people would be put on the right path to making a living.

From the above definitions, one can argue that education is the force of the future. It helps to produce creative and productive individuals who would contribute to the socio-economic development of any country. There is therefore not much place for the uneducated in the modern scheme of things. Countries, both developed and developing, including Ghana, have identified education, particularly basic education, as a basic human right, which every citizen must have access to for the development of the individual and consequently the entire nation. Basic education is of special significance because it is at this level that the disadvantaged in society such as the poor and the disabled have the opportunity of gaining some education.

However, there are numerous factors that are said to affect students' performance and the standard of education at this level. According to the Ministry of Education (2001), the performance of pupils in basic schools has been a matter of serious concern to the Government, the Ministry of Education and the Ghanaian public who look up to an effective basic education as the child's first step towards further training, a good job and eventual success in life. Basic education therefore evokes the passion of parents and the general public (**Daily Graphic**, June 14, 2001).

## OBJECTIVES OF STUDY

The objectives of this study therefore are:

- To assess the factors that are said to affect pupils' academic performance at the basic education level;
- To make a conclusive situational analysis of the relationships that exist between the factors and pupils' academic performance as they exist in the Kassena-Nankana district; and

- To make recommendations to help remove the bottlenecks that relate to the identified factors.

### METHODOLOGY

This study is an empirical qualitative one. The target population is all Junior Secondary Schools (JSS) and all settlements in the Kassena-Nankana district. However, a simple random sampling technique was adopted to select 14 JSS from Navrongo town and eleven other settlements representing 41.2 percent of JSS in the district. About 140 households were also randomly selected and interviewed.

Headmasters of the selected JSS and some officials of the District Education Directorate were also interviewed. Questionnaires were the main instruments used for the data collection. Data analyses were both qualitative and quantitative. Percentages and ratios were calculated, tables were constructed and chi-square tests were computed to establish the relationships between the factors and pupils' academic performance in school.

### THE STUDY AREA

Kassena-Nankana District is one of the six districts in the Upper East Region of Ghana with Navrongo as its district capital. It is located between Latitudes  $11^{\circ} 10'$  and  $10^{\circ} 30'$  North and longitudes  $1^{\circ} 01'$  and  $1^{\circ} 30'$  West. From North to South and East to West the district stretches 55km and 53km respectively and covers a total land area of  $1,674\text{km}^2$ . The district is bounded by the Republic of Burkina Faso to the North, Bongo and Bolgatanga Districts to the East, Sisala District to the West and Builsa and Mamprusi West districts to the South

### Assessment of the Factors Affecting Standard of Education

The Oxford Advanced Learners Dictionary of Current English (1974) defines the word "standard", among others as "something used as

a test or measure for weights, lengths, qualities or for the required degree of excellence" (p.857). Griffiths and Dawnes (1969) have observed that "...standards are relative to national norms and may also be relative to the periods when they were given since standards tend to change" (p.50). Arising from the above, especially from the Dictionary definition in terms of excellence, standard of education could be said to be a desirable state of an educational system which exhibits qualities of excellence. These qualities include high quality of teaching staff and of teaching and learning, effective and efficient school supervision and management, adequate acquisition of practical, technical and vocational skills, very good performance in school tests and a highly commendable level of academic performance comparable to that of other countries.

Among others, the factors that are said to affect pupils' performance in school are the socio-economic status of parents, especially the family size, the occupational status and educational level of parents. Others include qualifications of teachers, quality of teaching, adequacy of staff and accommodation, efficiency of school management and supervision and adequacy of textbooks, equipment and other school infrastructure (Knodel and Wongsith, 1991).

### Socio-Economic Status of Parents

The socio-economic status of parents refers to the positions occupied by parents in society that influence the types of environment and experiences that the child is exposed to, his/her economic security, the parental encouragement he/she receives that stimulates his/her intellectual performance and the care and discipline he/she receives.

The socio-economic status of parents impacts greatly on family size (i.e. number of children in a family) and depends on parents' educational level and occupation. It also impacts on the ability of parents to pay school fees, and show con-

cern for their children’s education. The effects of these variables on students’ performance in JSS in the Kassena Nankana district are examined below:

**Family Size**

Studies conducted in this area have all confirmed the fact that family size has an effect on pupils’ academic performance in school. Musgave (1979) has observed that “Intelligence Quotient (IQ) varies directly with family size” (p.49). He has also established that there is usually a dramatic fall in IQ in middle class families with four or more children.

Knodel and Wongsith (1991) argued that “a single sibling has better chances than two or more siblings in a family” (p.125). They observed that a large family size adversely affects the edu-

cational achievement of children.

They again observed that with additional children in the family, the already low and scarce resources get very limited, hence some families put a stop to their children’s education or choose to support one or two who show signs of succeeding in school. In such a situation, girls’ education is usually adversely affected.

In the Kassena Nankana District, using the 1990-1999 BECE results for the 14 schools studied, and using the chi-square tests to compute the relationship between family size and pupils’ academic performance, a positive relationship was shown between the two, particularly the influence of a family’s number of children on the number of pupils who obtained distinction as against those who failed in the examinations. (Table 1).

**Table 1. Family Size and Pupils’ Academic Performance**

Pupil’s Academic Performance	Family Size and Pupils’ Academic Performance							F.S. and Distinction and Fail			F.S. and Expected Frequencies	
	Performance Measure (Aggregate Grades)							Performance Measure (Observed Frequencies) Totals for Males & Females			Performance Measure (Expected Frequencies)	
	Distinction (6-12)		Pass (13-30)		Fail (31-60)		Total	Distinction (6-12)	Fail (31-60)	Total	Distinction (6-12)	Fail (31-60)
Family Size	M	F	M	F	M	F	Total					
2	1	0	2	1	1	0	5	1	1	2	0.5	1.5
3	0	0	4	0	3	0	7	0	3	3	0.75	2.25
4	1	2	6	7	5	7	28	3	12	15	3.75	11.25
5	4	2	3	8	2	1	20	6	3	9	2.25	6.75
6 & Over	6	1	24	17	11	21	80	7	32	39	9.75	29.25
<b>TOTAL</b>	<b>12</b>	<b>5</b>	<b>39</b>	<b>33</b>	<b>22</b>	<b>29</b>	<b>140</b>	<b>17</b>	<b>51</b>	<b>68</b>		

Source: Authors’ Field Survey, April/May 2002

In determining the level of relationships between the variables, the chi-square formula of

$$X^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

is used in computing the values.

Here  $O_i$  represents the number of pupils who obtained distinction or failed i.e. the observed frequencies and  $E_i$  represents expected frequencies obtained by multiplying the column total by the row total and dividing by the overall total.

Thus the  $E_i$  for a candidate from a family size of 2 who scored distinction as indicated in Table 1 is,

$$\frac{17 \times 2}{68} = \frac{34}{68} = 0.5$$

while for the one who failed is  $\frac{51 \times 2}{68} = \frac{102}{68} = 1.5$

These values are based on the Expected Frequencies in Table 1.

Therefore the  $\frac{(O_i - E_i)^2}{E_i}$  for family size 2, distinction and fail columns are calculated as follows:

Distinction:  $\frac{(O_i - E_i)^2}{E_i} = \frac{(1 - 0.5)^2}{0.5} = (0.5)^2$

Fail:  $(O_i - E_i)^2 = (1 - 1.5)^2 = (-0.5)^2$

Solution for the values  $\frac{(\text{Observed Frequency} - \text{Expected Frequency})^2}{\text{Expected Frequency}}$  give the following results:

Distinction:  $\frac{(O_i - E_i)^2}{E_i} = \frac{(-0.5)^2}{1.5} = 0.17$

Results for all the values are as follows:

$$\therefore X^2 = \frac{(0.5)^2}{0.5} + \frac{(0.5)^2}{1.5} + \frac{(0.75)^2}{0.75} + \frac{(0.75)^2}{2.25} + \frac{(0.75)^2}{3.75} + \frac{(0.75)^2}{11.25} + \frac{(3.75)^2}{2.25} + \frac{(3.75)^2}{6.75} + \frac{(2.75)^2}{9.75} + \frac{(2.75)^2}{29.25}$$

$$X^2 = 0.5 + 0.17 + 0.75 + 0.25 + 0.15 + 0.05 + 6.25 + 2.08 + 0.77 + 0.26$$

$$X^2 = \frac{11.23}{1}$$

$$V = (5 - 1)(2 - 1) = 4$$

$$X^2 = 4.5\% = \underline{9.49}$$

## INTERPRETATION

This analysis is being worked on the premise of a null hypothesis that there is no relationship between school performance and the variables identified. However, the computed chi-square value of 11.23 is greater than the critical chi-square value of 9.49, hence it is significant at 0.05 or 5 percent. This means that there is a positive relationship between family size and the number of pupils who obtained distinction and those who failed. The null hypothesis is therefore rejected in favour of the alternate hypothesis that states that there is relationship between school performance and the variables. The same statistical techniques are used to compute the chi-square values to help establish the relationship between pupils' academic performance and other variables including fathers' and mothers' level of education, fathers' and mothers' occupation, payment of school fees, and concern shown by parents for their children's education.

## Parents' Level of Education

Highly educated parents demand more education for their children (Agyeman 1986). Antwi (1994) observed that "the child of an educated couple has better advantages over the one from an illiterate couple" (p.20).

In the Kassena Nankana district, using figures in Table 2 for the calculations, computed chi-square values of  $X^2 = 15.22df^6$   $p < 0.05$  and  $17.08df^6$   $p < 0.05$  for fathers and mothers respectively were obtained. A father's or mother's level of education and a pupil's academic performance are found to be positively related. Thus the probability that a pupil from a highly educated father or mother would perform poorly in school is considered slim.

**Table 2: Fathers' and Mothers' Level of Education and Pupils' Academic Performance**

Pupils' Academic Performance Parents' Level of Education	Performance Measure (Aggregate Grade)						Total	
	Distinction 6-12		Pass 13-30		Fail 31-60		Father	Mother
	Father	Mother	Father	Mother	Father	Mother		
No Schooling	10	11	40	43	40	42	90	96
Basic Education	3	3	16	11	11	9	30	23
Secondary Education	3	1	9	13	0	0	12	14
Tertiary Education	1	2	7	5	0	0	8	7
Total	17	17	72	72	51	51	140	140

*Source:* Authors' Field Survey, April/May, 2002.

**Parents' Occupational/Income Status**

High social class families set high standards of education for their children in addition to the opportunities given them to learn freely (Musgrave 1979). Again, the encouragement high class families give to their children through the provision of their needs including that of private tuition at home lays a solid foundation for the children to perform well in examinations in schools.

In 1973, approximately 71.3 percent of scholarships and bursaries for the top ten secondary schools in Ghana went to children of high and middle-income parents (Antwi, 1994). Upper and middle socio-economic families create a congenial learning environment for their children to reach high levels of education through the provision of books, writing materials and other educational needs (Agyeman, 1986). Therefore, a high occupational/income status of

parents has a positive influence on the educational achievement of their children.

This assertion was confirmed in the Kassena Nankana district, where a positive statistical relationship was established between parents' occupational/income status and children's performance. The chi-square test calculation using figures from Table 3 gave the following results:  $X^2 = 16.7df^6$   $p < 0.05$  for fathers and  $X^2 = 15.3df^6$   $p < 0.05$  for mothers.

Table 3 indicated that children of professional fathers did not register any fail as against 33 of farmers' children. Again, children of mothers who are professionals registered no fail, while no labourer's child scored distinction. These facts underscore the importance of fathers' and mothers' occupational status to their children's performance.

**Table 3: Fathers' and Mothers' Occupational/Income Status with Pupils' Academic Performance**

Parents' Level of Education	Pupils' Academic Performance		Performance Measure (Aggregate Grade)						
			Distinction 6-12		Pass 13-30		Fail 31-60		Total
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	
Farmers	10	8	42	35	33	38	85	81	
Labourers	0	0	6	8	9	3	15	11	
Service Occupations	4	7	9	20	9	10	22	37	
Professionals	3	2	15	9	0	0	18	11	
Total	17	17	72	72	51	51	140	140	

Source: Authors' Field Survey, April/May, 2002

**Payment of School Fees**

A cross tabulation and chi-square test value of  $X^2 = 15.5df^2$   $p < 0.05$  using figures in Table 4 showed a strong statistical relationship between payment of school fees (paid regularly, could not pay regularly) and pupils' academic performance in the district. The survey revealed that 26 (51 percent) of pupils who failed could not pay their school fees regularly while (82.4 percent) of pupils who scored distinction paid their fees regularly.

**Table 4: Payment of School Fees and Pupils' Academic Performance**

Payment of School Fees	Pupils' Academic Performance			Total
	Performance Measure (Aggregate Grade)			
	Distinction 6-12 No.	Pass 13-30 No.	Fail 13-30 No.	
Could not pay regularly	3	14	26	43
Paid regularly	14	48	25	97
Total	17	72	51	140

Source: Authors' Field Survey, April/May, 2002

**Concern Shown by Parents for Children's Education**

The results of the cross tabulation and the computed chi-square test value of  $X^2 = 10.37df^2$   $p < 0.05$  using figures in Table 5 indicate that there is a strong statistical relationship between concern shown by parents for their children's education and the children's academic performance. The study showed that all pupils who scored distinction had concerned parents.

**Table 5: Parents' Concern for Pupils' Education and Pupils' Academic Performance**

Pupils' Academic Performance	Performance Measure (Aggregate Grade)			Total
	Distinction 6-12 No.	Pass 13-30 No.	Fail 13-30 No.	
Concern for Pupils' Education				
Parents were not concerned	0	5	12	17
Parents were concerned	17	67	39	123
Total	17	72	51	140

Source: Authors' Field Survey, April/May, 2002

**Staff Quality, Staff Numerical Strength Supervision of Schools and Logistics**

Teacher quality and quality of teaching to a large extent influence learning outcomes in schools. Anamuah-Mensah (1999) attributes the poor performance of pupils in the Basic Education Certificate Examination (BECE) to the inadequate pedagogical and academic knowledge of some teachers. Similarly, the chief examiners of the West African Examinations Council blame the poor performance of pupils, in part, on what they term inadequacies as well as the poor methods of teaching in schools. Anamuah-Mensah (1999) again observed that adequate supply of teachers is a key to the success of the Ghana education reform programme while Salia (1998) has indicated that lack of teachers is causing low quality education especially in the rural areas.

Inadequacy of accommodation, which denotes the level of insufficiency of classrooms, workshops, libraries and teachers' living quarters, among others, does not facilitate teaching and learning. It has been noted that poor accommodation facilities in schools are some of the causes of low quality education in Ghanaian schools.

Ineffective school supervision has been a serious concern to educational authorities since colonial times in this country. This concern was again

recently re-echoed by Anamuah-Mensah (1999) when he indicated that "inadequate supervision and monitoring of teachers has been one of the major causes of pupils' poor performance in schools and therefore one of the major problems facing the Ghana Education Service" (p.7).

Adequate and timely supply of educational materials and equipment to schools enhances effective teaching and learning and helps to improve pupils' academic performance. Anamuah-Mensah also observed that inadequate teaching and learning materials are part of the plethora of deficiencies afflicting the Ghanaian education system and a major contributory factor to low academic performance of pupils.

#### **Adequacy of Qualified Staff and Availability of Accommodation**

The survey revealed a shortage of qualified staff in the district, especially among teachers with "General" qualification. All the 14 schools had their required one pre-technical teacher (Table 7). Three schools, Manyoro, Sirigu and Kologo JSS did not have pre-vocational teachers while Chiana (5), Gwenia (4), Manyoro (4), Sirigu (6), Natugnia (4) Nayagenia (9) Doba (4) Bosco (4) and Kologo (6) JSS did not have their required number of general teachers. Thus only 5 of the 14 schools surveyed had their full complement of teachers. This situation could have an adverse effect on the academic performance of pupils in the district.

With respect to accommodation, the survey did not reveal any serious classroom accommodation problem. Staff quarters were, however, not available. Approximately 20 percent of the teachers travelled between 2km and 20km each day to school with many arriving late. Therefore, cumulatively, many contact hours were lost each week. This situation impacts negatively on the pupils' academic performance. Only one school among the 14 surveyed had a workshop while the whole district had only three. The practical

aspects of pre-technical and pre-vocational subjects were therefore not effectively taught. This could lead to a decline in the academic performance of pupils, especially with regard to practical training.

#### **Teachers' Qualifications and Years of Teaching**

The survey revealed that 69.5 percent of teachers in the schools were trained. Balobia JSS had the highest number of trained teachers (12) followed by Tedom JSS (9), Kologo (8), Adabayeri (6), Bosco (6), Chiana (4), Natugnia (4). Manyoro JSS, Sirigu JSS and Paga JSS had the least number of trained teachers (2 each) (Table 8). Lack of trained teachers might have contributed to the low academic performance of pupils in the schools surveyed.

As far as the number of years of teaching is concerned, it was observed that as many as 52 percent of the teachers had taught for four years or less, meaning that majority of the teachers did not have much experience in teaching, something that can affect the quality of their teaching and can also significantly contribute to the children's low level of performance as shown in Table 6, which reveals that from 1990 to 1999, only 7.6 percent of the pupils obtained distinction as against 17.5 percent of the pupils who failed.

#### **Efficiency of School Supervision and Management**

All the headmasters in the 14 schools visited, indicated that they managed their schools efficiently. It was, however, observed that there were no School Management Committees (SMCs) to formulate general policies for the schools, ensure environmental cleanliness in the schools, monitor the regular attendance of teachers and pupils and ensure that adequate teaching and learning materials are supplied to the schools. Besides, approximately 72 percent of Parent/Teacher Association (PTAs), who under

Table 6: Aggregate Grades for the 14 JSS 1990 to 1999

Year	Distinction		Pass		Fail	
	No.	%	No.	%	No.	%
1990	31	27.2	82	71.9	1	0.9
1991	19	9.8	142	73.2	33	1.7
1992	54	22.4	167	69.3	20	8.3
1993	51	15.7	219	67.6	54	16.7
1994	23	6.4	267	73.7	72	19.9
1995	57	11.9	327	76.0	52	12.1
1996	37	7.4	373	74.6	90	18.0
1997	20	3.3	513	83.7	80	13.0
1998	21	3.2	524	78.8	120	18.0
1999	11	1.5	500	69.6	208	28.9
Total	318	7.6	3110	74.9	730	17.5

Source: Authors' Field Survey, April/May, 2002

the new reform programme are required among others to support school authorities in maintaining discipline in schools and help to do rehabilitation works on school buildings, according to the headmasters, were ineffective. In addition, only 57 percent of the headmasters indicated that their schools were inspected once in a year. The cumulative effect of the absence of SMCs, ineffective PTAs and irregular supervision of schools, could have contributed to the increasing number of failures and the decreasing number of distinctions, as the years went by, in the schools visited. (Table 6).

#### Textbooks and Equipment Supply

All the headmasters interviewed lamented about inadequate textbook supply and lack of vocational skills equipment. Since textbooks are the major learning materials used in schools, their absence could also lead to the poor performance of pupils as Table 6 depicts.

## SUMMARY OF FINDINGS

The main objective of this study has been to find out whether factors like family size, parents' level of education, parents' occupational status, payment of school fees, parents' concern for children's education, adequacy of qualified staff in schools, teachers' qualification and experience and textbooks and equipment supply have any relationship with pupils' academic performance in the Kassena Nankana district in the Upper East Region of Ghana and by implication, Ghana in general.

#### Family Size

The study revealed a positive statistical relationship between family size and pupils who obtained distinction and those who failed. This finding suggests that a large family size impacts negatively on the academic performance of pupils, especially the girls who may be withdrawn from school altogether when the family faces serious financial problems.

#### Parents' Level of Education

A positive statistical relationship was also established between parents' level of education, more especially that of the mother, and the child's academic performance. Usually, literate parents tend to give better formal education to their children than illiterate ones. At the basic level, according to the survey, many educated parents pay for extra tuition for their children, an assistance that helps to improve their academic performance and also assists them to move higher on the academic ladder.

#### Parents' Occupational Status

Parents' occupational status also positively affects pupils' academic performance. The study revealed that pupils from high-income families perform better than their counterparts from low-income homes. High-income parents who are usually literate tend to appreciate the usefulness of education and therefore make every effort to assist their children financially by providing their needs. This tends to motivate the children

to put in extra effort to improve their academic performance.

### **Payment of School Fees**

Again, the study revealed that pupils whose parents were able to pay their school fees regularly performed better academically. Willingness and the ability of parents to pay their children's school fees promptly, stimulate and encourage such pupils to learn extra hard. Such pupils are able to attend classes continuously while children who are unable to pay their fees are forced to go home thus missing classes, something that could lead to their poor performance in examinations.

### **Parents Concern for Children's Education**

The study revealed that pupils who scored distinction had parents who were concerned and interested in their children's education while many of the children who failed indicated that their parents were not concerned. Concerned parents usually show personal interest in their children's education by providing their needs, paying frequent visits to their schools, monitoring their progress at school and giving them all the necessary encouragement. These serve as an impetus for the children to improve their academic performance in school.

### **Staff Quality, Staff Numerical Strength, Supervision of Schools and Logistics**

A direct causality could not be established between pupils academic performance and the above variables. It was, however, not invalidated. This is because there are strong theoretical reasons, as indicated earlier, for the assertion that these variables affect the standard of education as indirectly indicated by the study. For instance, as indicated in Table 6, whereas in 1990, 27.2 percent of the pupils in the 14 sampled schools had distinction with only 0.9 percent failures, in 1999 only 1.5 percent of the pupils had distinction as against 28.9 percent failures. This situation could only come about through many factors including those above as

the study indicated that there were deficiencies in all the above variables.

### **RECOMMENDATIONS**

From the findings of the research, the following recommendations are made to help improve academic standards, more especially at the basic level, in the Kassena Nankana district in particular and Ghana in general.

To help control family sizes to manageable levels that couples can effectively cater for, the Ministry of Health should mount an intensive educational campaign to sensitize couples about the problems associated with having many children. In the area of family planning, the Ministry should provide free services. This would help increase the economic access of the poor to family planning services which can help change their attitude towards having larger families.

To improve the income levels of parents to be able to cater for their children's needs, the District Assembly should give loans, from their poverty alleviation fund, to needy parents to enable them improve upon their economic activities and thus raise their incomes. Payment of school fees should also be scheduled to coincide with the harvesting season when parents would have money.

To get parents to be more concerned about their children's education, the District Education Directorate should organize continuous public education in the form of durbars and seminars about the need for them to change their negative attitudes towards their children's education.

To help increase the numbers and improve the quality of teachers, supervision and textbooks and equipment supply, the District Assembly should sponsor many local people in Teacher Training Colleges so that such teachers would return to teach in the district. The Regional and District Directorates of Education should help establish vibrant School Management Committees and Parent/Teacher Associations in schools. This will help ensure effective management of

Table 7: Adequacy of Qualified Teaching Staff

Name of J.S.S.	Total Enrolment	SUPPLY OF TEACHERS						BACK-LOG		
		Required			Available			Pre-Tech.	Pre-Voc.	General
		Pre-Tech.	Pre-Voc.	General	Pre-Tech.	Pre-Voc.	General			
Balobia	378	1	1	17	1	1	17	-	-	-
Chiana	148	1	1	9	1	1	5	-	-	4
Gwenia	189	1	1	10	1	1	4	-	-	6
Manyoro	99	1	1	9	1	0	4	-	1	5
Sirigu	237	1	1	11	1	0	6	-	1	5
Tedam	242	1	1	12	1	1	12	-	-	-
Adabayeri	217	1	1	10	1	1	10	-	-	-
Bui	66	1	1	6	1	1	6	-	-	-
Natugnia	96	1	1	6	1	1	4	-	-	2
Nayagenia	125	1	1	10	1	1	9	-	-	1
Doba	143	1	1	6	1	1	4	-	-	2
Bosco	247	1	1	10	1	1	8	-	-	2
Paga	186	1	1	10	1	1	10	-	-	-
Kologo	148	1	1	9	1	0	6	-	1	3
Total		14	14	135	14	11	105	-	3	30

Source: Authors' Field Survey, April/May, 2002

**Table 8: Teachers' Qualifications and Teaching Experience**

Name of JSS	Qualifications		Teaching Experience (Years)			
	Trained	Untrained	0-4	5-9	10-14	15+
Balobia	12	5	7	4	0	6
Chiana	4	1	3	1	1	0
Gwenia	3	1	2	2	0	0
Manyoro	2	2	1	2	0	1
Sirigu	2	4	6	1	0	0
Tedam	9	3	9	0	1	2
Adabayeri	6	4	4	1	1	4
Bui	4	2	4	0	0	2
Natugnia	4	0	2	2	0	0
Nayagenia	8	1	2	2	0	5
Doba	3	1	2	1	1	0
Bosco	6	2	5	2	1	0
Paga	2	2	3	1	-	-
Kologo	8	4	6	3	2	1
Total	73	32	55	22	7	21

*Source:* Authors' Field Survey, April/May, 2002

schools in the district. They would also help improve the condition of school buildings and other infrastructure requirements, help recruit teachers, ensure environmental cleanliness, regular supply of textbooks and other teaching materials and monitor the regular and punctual attendance of teachers. Again, the Circuit Inspectorate Sections in the district should be properly constituted and well resourced to enable them do effective supervision and monitoring of schools. This would help create a state of expectancy among teachers and pupils and also help reduce lateness and absenteeism among both teachers and pupils.

Timely supply and replacement of textbooks and other school equipment is an important leverage in the improvement of educational performance of pupils. Therefore, the District Education Oversight Committee, the Circuit Inspectorate Sections, the School Management Committees and the Parent/Teacher Associations who are expected under the current Education Reform programme to ensure among others the regular supply of textbooks to schools, should be encouraged by the Ghana Education Service to effectively perform this role.

## CONCLUSION

In this study, factors affecting the standard of education in Junior Secondary Schools were investigated. It was to find out whether the positive relationships which exist between some known variables and pupils' academic performance also hold good in Kassena Nankana district. The study established positive relationships between academic performance and variables like family size, parents' educational level, occupational status, payment of school fees and interest parents show in their children's education.

It was, however, difficult to show direct causality between variables like adequacy of teaching staff, qualification of teachers, efficiency of school supervision and management and textbooks and equipment supply. In spite of that, it could be inferred that the continued deteriorating academic performance of pupils in the sampled schools could be due, in part, to the inadequacies that exist in these variables in the district.

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