

BASIC SCHOOL DROPOUT IN GHANA: A CASE STUDY OF THE AMANSIE WEST DISTRICT

I. Braithmah and E. Oduru-Ofori

Department of Planning

Kwame Nkrumah University of Science and Technology
Kumasi, Ghana

ABSTRACT

In view of the increasing cost of education the persistent phenomenon of school dropout has become a constant worry to all stakeholders. The focus of this paper was to assess the trend of basic school dropout in Amansie West, a predominantly rural district in Ghana and to further determine the main causes and policy implications of the phenomenon in the district. Analysis of the data revealed a downward trend in the dropout rates. At the primary school level, the dropout rate reduced from 5.4 percent in 1998/99 to 4.5 percent in the year 2000/01. At the Junior Secondary School (JSS) level, the dropout rate also reduced from 9.7 percent in 1998/99 to 6.7 percent in 2000/01. This trend was attributed to the diversification of the income sources of parents, which enabled them to earn more income to take care of their wards in school. Further analysis of data gathered revealed that about 45.4% of the parents of school dropouts in the district were extremely poor with annual incomes less than ₵600,000. The views of all stakeholders of education in the district confirmed that the causes of basic school dropout were mainly poverty related. In view of the strong inverse relationship between rates of school dropout and income levels it is recommended that pro-poor programmes be initiated and implemented in order to increase enrolment and retention of children in school for the ultimate benefits of public investment in education to be derived.

Keywords: Basic Education, Dropout, Poverty, Enrolment, Retention

the key to socio-economic betterment and development of both the individual and the state.

INTRODUCTION

The increasing demand for education and the considerable efforts made by people, both individually and collectively to obtain education is due to the widely held belief that education is

Research has proved that there is a positive statistical correlation between literacy and average per capita income of developing countries (Kunfaa, 1991). According to Conable (1989),

without education, development will not occur. In view of this it is often alleged that a country that fails to keep its children in school till graduation or full completion of their courses of study is bound to fail in the execution of its duties.

The proper education of children is of major concern today in Ghana. This concern extends from the highest governmental level to District Assemblies and to parents. Consequently considerable financial resources are committed to the development of education annually. According to the 2002 Budget Statement the total allocation to the Ministry of Education was €1,800 billion, representing 70 percent of the total allocation to the social services sector (Daily Graphic, 2002)

In recognition of the strong relationship between poverty and access to education the Ghana government in its long term educational policy stated that basic education shall be free and compulsory to all children of school going age (Vision 2020). Basic education forms a critical component of Ghana's Highly Indebted Poor Countries (HIPC) initiative and the Ghana Poverty Reduction Strategy (GPRS) that are currently being implemented (GPRS, 2001). One of the objectives stated in the above documents on education is "increasing the in-school retention rate at all levels of education, particularly among females". The educational system is supposed to retain in school all who enrol till graduation but this is not often so. The purpose of this study was to determine the Basic School Dropout rate in the Amansie West District of the Ashanti Region and to establish the main causes of the phenomenon.

Statement of Problem

Basic Education refers to the level of education in any country that constitutes the foundation stage offered to all children (Commonwealth Secretariat, 1991). Children in Ghana start primary school with the hope of staying in school until they write their basic school certificate ex-

amination at the end of JSS form three. However not all these children are able to continue up to the end of the JSS. Some leave school prematurely.

Dropout rates in the country remained high at 20 percent for boys and 30 percent for girls at the Primary school level. At the JSS the dropout stood at 15 percent for boys and 30 percent for girls in 2000/2001. In one district in the north, dropout rates for boys and girls were 74 percent and 83 percent respectively (GPRS, 2001). This situation is very prevalent in rural communities where many of the inhabitants are victims of poverty. The Amansie West District of the Ashanti Region is not spared from this problem of children dropping out of school.

According to the Medium Term Development Plan of the Amansie West District (1996), the basic school dropout rate was 10 percent in 1995. This meant that for every 100 children in school that particular year, ten of them dropped and did not proceed to the next class. This level of dropout was attributed to parental ignorance of the importance of education among other factors. Such ignorance is alleged to lead to inadequate support for the children to stay in school.

However given the level of sensitisation, this assertion could not be the main cause of school dropout. It is therefore anticipated that the levels of poverty could be an overriding factor in the determination of the level of school dropout.

Study Objectives and Methodology

The study was aimed at achieving the following objectives.

1. To determine the trend of school dropout rates in the Amansie West District.
2. To ascertain the main causes of school dropout in the district.
3. To determine the policy implications of school dropouts.

The study covered the trend of school dropouts at the Basic School, that is, from Primary school class one to Junior Secondary School form three. Data needed for the study was collected from both primary and secondary sources. The first part of the study was devoted to a review of the relevant literature. Data on school enrolment (from 1998/99 to 2001/2002) were also collected from the District Education office in the district. Questionnaires were designed and used in the collection of primary data.

Seventeen schools were selected randomly from a list of 148 schools for the collection of detailed data on school dropouts including their numbers and whereabouts, reasons for dropping out etc. The total numbers of dropouts for each class in the selected schools were used together with the enrolments to determine the dropout rates for each class. Fifty school dropouts and twenty-two parents of school dropouts were randomly selected and interviewed.

Characteristics of the Amansie West District

The Amansie West District is located in the South Western part of the Ashanti Region. It shares a common boundary on its western part with the Atwima District. It is bounded to the north by the Bosomtwe-Atwima-Kwawoma District, while a regional boundary separates it from the Central and Western Regions in the southern most part. The district falls within latitudes 6° 05' N and 6° 35' N and longitudes 10° 40' W and 20° 05' W. It covers an area of about 1,364 km² and forms about 5.4% of the total land area of the Ashanti Region.

According to the 2002 population census the district had a population of 108,273 in the year 2000 which was made up of 49.1 percent males and 50.9 females. The District is predominantly rural because only one town, Manso Atwere, had population above 5000 people. A large proportion of the district's population live in small farming communities.

Most of the people in the district are engaged in agriculture and mining. Agriculture alone employs about 70 percent of the economically active population. The service sector employs about only 2.2 percent of the labour force. The district can therefore be described as predominantly rural and depending mainly on primary production.

Mining is the second largest contributor to the district's economy employing about 22 percent of the labour force. They are involved in both legal and illegal operations. Industrial activities in the district are limited. They are mainly cottage industries like weaving, palm oil extraction, "akpeteshie" distilling, charcoal burning and gari processing.

The Concept of School Dropout

According to Brimer and Pauli (1971) a dropout is defined as a person who leaves school before the end of the final year of the education stage in which he or she is enrolled. Dropout rate is the percentage of pupils or students who leave school before completing a grade or a particular level of education (UNESCO, 1987).

It is alleged that those who dropout are not likely to have strengthened basic literacy and numeracy to the point where it becomes resistant to forgetting (Brimer and Pauli, 1971). It is now known that those who drop out in the early years of schooling are much more likely to relapse into illiteracy than those who complete the cycle.

School Enrolment and School Dropout Cases

The district has ninety-eight primary schools, fifty Junior Secondary Schools and three Senior Secondary Schools. The schools have been divided into seven educational circuits and these are Adagya I and II, Manso I, II, III, IV, and V. The Primary and Junior Secondary Schools are fairly evenly distributed within the district. Thus in terms of physical access to schools, the district is fairly well endowed.

Enrolment at the primary school level was 16,877 as at the beginning of the 2001/2002 academic year. Of this figure 8,980 (53.2 percent) were males and 7,897 (46.8 percent) were females. The average number of pupils per class was 33, but this varies considerably depending on the community. About 87 percent of the primary schools require major rehabilitation and 78 percent do not have permanent structures.

Enrolment at the Junior Secondary School level at the beginning of the 2001/2002 academic year as recorded by the Ghana Education Service of the Amansie West was 4,829 comprising of 58.5 percent males and 41.5 percent females.

The total enrolment for the entire district has been increasing since the 1997/98 academic year. The enrolment increased from 14,875 in 1997/98 to 16,877 in 2001/2002 academic years showing an increase of 13.5 percent over the period. This indicates that the educational campaigns organized by the district authorities have gone down well with the people and as such their perception about the importance of education was changing.

The proportion of males to the entire enrolment was between 53 percent and 54.3 percent over the five-year period and that of females was between 45.7 percent and 47 percent over the same period. This shows that male enrolment at the primary school exceeded that of females over the period.

The enrolment at the JSS level increased from 4,024 in 1997/98 to 4,829 in 2001/2002 recording an increase of 19.98 percent. Males constituted between 56.2 percent and 58.5 percent of the entire enrolment while females constituted between 41.5 percent and 43.8 percent of enrolment at the JSS level. Like the primary level, the proportion of males exceeded that of females at the JSS level. However the sex ratio at the primary was better than that of the JSS, which is an indication that retention of the girl child in

school from primary through to the JSS was still a problem.

Increase in enrolment of females has been attributed to the efforts of the "Girl Child Education Unit" in the district in educating parents on the need to send their female children to school. Overall increase in enrolment has also been attributed to a general increase in the number of children of school going age. However, analysis of the data showed that other factors contributed to the increasing enrolment and retention.

As indicated in table 1 below the highest dropout occurred in class four for males at the primary school level. It was 8.3 percent, 8.5 percent and 6.9 percent for the 1998/99, 1999/2000 and 2000/2001 academic years respectively and these were all in class four. However the dropout rate for females was highest in class five. The female dropout rates in class five over the period were 9.7 percent, 6.7 percent and 6.9 percent for 1998/99, 1999/2000 and 2000/2001 academic years respectively.

Table 1: Dropout Rates in Percentages (Primary School Level)

Class	1998/99			1999/2000			2000/2001		
	M	F	T	M	F	T	M	F	T
1	2.8	4.9	3.9	3.7	4.1	3.9	2.6	1.8	2.1
2	4.7	4.0	4.4	4.1	3.1	3.6	3.8	5.2	4.5
3	4.7	3.6	4.2	4.4	5.3	4.8	5.4	5.9	5.4
4	8.3	7.5	8.0	8.5	7.2	7.9	6.9	3.8	5.3
5	5.1	9.7	7.1	6.1	3.7	5.0	6.9	6.9	6.9
6	4.9	6.3	5.5	3.4	4.5	3.8	3.2	2.2	2.8
Total	5.1	5.8	5.4	4.8	4.6	4.8	4.8	4.2	4.5

Source: Field Survey, April 2002

At the Junior Secondary School level, the highest rates of dropouts for both males and females were registered in form two whilst the lowest was recorded in form three. The dropout rates in form two over the period were 11.5 percent, 9.3 percent and 10.1 percent for 1998/99, 1999/2000 and 2000/2001 academic years respectively. The female dropout rate is generally higher than that of males. In 1999/2000 and 2000/2001, 10.5 percent and 11.8 percent of the females dropped out respectively compared with 8.3 percent and 8.5 percent for the males during the same period. The total dropout rate at the Junior Secondary School level had also fallen from 9.7 percent in 1998/99 to 6.7 percent in 1999/2000 and 2000/2001. Table 2 shows the dropout rates for the various classes at the JSS level within the study period.

Table 2: Dropout Rates in Percentage (Junior Secondary School Level)

Form	1998/99			1999/2000			2000/2001		
	M	F	T	M	F	T	M	F	T
1	12.5	10.1	11.5	7.1	9.9	6.6	6.9	4.8	6.0
2	12.6	10.1	11.5	8.3	10.5	9.3	8.5	11.8	10.1
3	5.3	5.3	5.3	3.0	5.8	4.4	4.3	1.7	3.2
Total	10.5	8.7	9.7	6.3	7.2	6.7	6.7	6.6	6.7

Source: Field Survey, April 2002

The dropout rates for the entire basic schools (i.e. both primary and JSS) from 1998/99 to 2000/2001 were 6.9 percent, 5.4 percent and 5.2 percent respectively. This indicates that the dropout rates have been falling since the 1998/99 academic year. The trend of dropout figures at the basic school level is thus very encouraging and efforts should be stepped up to sustain the decline in order to improve upon the retention of children in school.

Four batches of Junior Secondary School students who entered form one and completed form three were studied to find out the rate of dropouts in every batch of students. This was done for all the eight Junior Secondary Schools sampled. These batches were those of 1996/97-

1998/99, 1997/98-1999/2000, 1998/99-2000/2001, and 1999/2000-2001/2002.

The figures revealed that the highest number of student dropouts for both males and females in all the batches of students occurred in form two. The dropout rates as presented in table 3 were 13.6 percent, 10.7 percent, 10.5 percent and 13.6 percent for females in the 1996/97-98/99, 1997/98-99/2000, 1998/99-2000/2001 and 1999/2000-2001/2002 batches respectively. Female dropout rates exceeded those of males at the JSS level.

The total dropout rates (both males and females) for the four batches (from 1996/97 to 2001/2002) were 18.8 percent, 15.26 percent, 21.60 percent and 20.79 percent. Thus for a batch of students to pass through Junior Secondary School form one to form three, between 14.6 percent and 22.7 percent of the male students would have dropped out of school. Similarly, between 16.1 percent and 20.6 percent of the female students would have dropped out of school. Thus for an entire batch of Junior Secondary School students to finish form three, between 15.2 percent and 21.6 percent of the students would have dropped out of school. The details are indicated in table 3.

Characteristics of Dropouts

The academic performance of 82.6 percent of the dropouts interviewed was above average. Only 17.4 percent of the dropouts had their academic performance below average. This indicates that many of them did not abandon school due to poor academic performance.

Sponsors/Guardians of Dropouts

The role of guardians in reducing basic school dropout cannot be over emphasized. In addition to the financial support, children at that level need effective guidance to develop physically, morally and mentally.

The data presented in table 4 indicate that moth-

Table 3: Drop-Out Rates (Batches of JSS Pupils)

Form	96/97 – 98/99			97/98 – 99/00			98/99 – 00/01			99/00 – 01/02		
	M	F	T	M	F	T	M	F	T	M	F	T
JSS1	2.4	4.3	3.4	0.5	0.6	0.5	12.5	10.1	11.4	7.1	6.0	6.1
JSS2	8.5	13.6	11.0	12.1	10.7	11.5	8.3	10.5	9.3	9.6	13	11.3
JSS3	8.3	5.7	7.0	3.0	5.2	4.1	4.3	1.7	3.2	5.1	3.4	4.4
Total	17.3	20.3	18.8	14.6	16.1	15.2	22.7	20.1	21.6	20.9	20	20.7

Source: Field Survey, April 2002

ers alone formed the highest number of sponsors (44 percent) of the school dropouts. Fathers sponsored about 32 percent of the entire dropouts interviewed whilst grand parents sponsored 20 percent. Those sponsored by both parents were only about 4 percent. This indicates that it is very important for both parents to support their children in school as their little efforts put together can have a great impact. Single parents find it very difficult caring for their children in school especially when they happen to be females. Given the fact that poverty among females in Ghana is twice as much as males and the high proportion of female guardians whose

Table 4: Sponsors of School Dropouts

Sponsors	Number	%
Father only	16	32
Mother only	22	44
Both Parents	2	4
Grand Parents	10	20
Total	50	100

Source: Field Survey, April 2002

wards dropped out of school, there appears to be a strong link between poverty and school dropout.

Out of the 68.2 percent of the parents who were married, only 31.8 percent of them were still married to either the biological father or mother of the school dropouts. The remaining 68.2 percent had remarried. This means that many of the

dropouts were not staying with both biological parents and this could have been the reason why their (i.e. the children) welfare especially in terms of support for their education was not priority. Also 13.6 percent of the parents were widowed whilst 18.2 percent were divorcees. Therefore a total of 31.8 percent of the parents interviewed were single. Single parenthood has its own problems. Control over children becomes difficult and often results in the children becoming truants. Single parents also find it difficult to cater for their children financially.

Background of Parents of School Dropouts

About 27.3 percent of the parents of the school dropouts had no formal education. The same proportion left school during or after primary school. Thus in all as many as 54.6 percent of the parents of school dropouts had no certificate of formal education. These two categories may not see the need to ensure that their children remain in school since they themselves had little or no experience in education themselves.

Income Levels of Parents of School Dropouts

As many as 63.6 percent of the parents of dropouts interviewed were subsistent farmers, 13.6 percent were petty traders whilst 22.8% were engaged in mining or menial jobs. As indicated in Table 5 below, 45.4 percent of the parents of the school dropouts earn less than €50,000 (or €600,000 a year). These parents may be classified as extremely poor since their incomes are less than the extreme poverty line of €700,000 stated in the GPRS (2003). Furthermore as many as 72.7 percent of the parents interviewed earned incomes below €100,000 a month or €1,200,000

a year which is just a little more than the 900,000 upper limit of poverty in Ghana. With such low incomes parents find it extremely difficult to cater for the basic needs of their families and at the same time care for children in school. With such an income it is evident that children's basic needs such as uniform, books and furniture may not be met. The fact that majority of the parents of the dropouts are extremely poor is a clear indication that poverty is the main cause of school

Table 5: Income Level of Parents of School Drop outs

Monthly Income in ₵'000	Number Of Parents	%
0 – 49	10	45.4
50 – 99	6	27.3
100 – 149	6	27.3
150 – 200+	0	0.00

Source: Field Survey, April 2002

dropout in the district. This fact was corroborated by the views of the stakeholders on the causes of school dropouts in the district.

Analysis of the Causes of School Dropouts

All stakeholders of the educational sector in the district including the Ghana Education Service identified the main cause of school dropouts to be poverty. The school authorities (i.e. headmasters and teachers) also indicated that financial problems due to poverty were the main causes of school dropouts. The school dropouts themselves attributed the cause of their dropping out of school mainly to financial problems faced by their parents.

Out of the seventy-seven people interviewed (that is, fifty dropouts and twenty-two parents of dropouts), 60 percent ascribed the cause of dropout to poverty, 15.6 percent attributed it to lack of parental care, 10 percent attributed it to parental ignorance and 6.5 percent associated it with broken homes. The remaining 7.9 percent as-

cribed the causes of dropout to truancy, peer group pressure, poor academic performance, poor school infrastructure, mining activities and teenage pregnancy. The implications of the various causes of school dropouts in the district are analysed as follows:

Financial Problems, Including Poverty on the Part of Parents

Absolute poverty exists in many communities in the District. Most of the efforts and concern of the people were directed towards the satisfaction of the basic means of survival. Many parents found it difficult to meet the basic necessities of life due to the low levels of their incomes. Many of the adult population are involved in subsistence agriculture. They produce food crops and other raw materials, which have lower prices on the market. They also depend on natural weather conditions for cultivation. Unfavourable weather conditions affect production. Due to these circumstances many parents are not able to purchase basic school items for their children and pay their school fees. Once these basic needs are absent, children lose interest in going to school, and eventually dropout of school.

Inadequate parental care was cited as a cause of school dropout that could be traced or linked to the level of poverty. Some parents are not able to care for their wards due to poverty or financial problems. These children often stop schooling. Some men also neglect their wives and children. These children are left at a very tender age in the care of their mothers alone. Caring for the children in school becomes a problem and they eventually dropout of school.

Broken Homes

Broken homes occur through divorce or death of a parent. Divorce or death of one parent leaves the other as a single parent. Many of the single parents interviewed found it difficult to cater for their children in school due to the financial problems that they have. Thus their children eventually drop out of school.

Unsuitable School Environment

This particular cause includes inadequate teachers, poor school infrastructure and the fear of teachers. The number of teachers both trained and untrained is inadequate. The remote communities face the greatest problem with several classes being combined under the supervision of one teacher. Absenteeism on the part of both teachers and pupils is also very common in the rural areas. At times for a whole week, there will not be any lessons taught in these classes. This reduces the interest of the children in school. The absence of teachers in some of these schools causes pupils to dropout of school.

Some of the schools also have poor infrastructure that is not attractive to the school going children. In some schools, children have to leave the classroom for home anytime there are signs of rain. Some children get scared of very severe punishment (including corporal punishment) by teachers and school prefects. They therefore find the school environment unfriendly and so prefer staying out of school.

Poor Academic Performance

Pupils/students at times drop out of school in the district due to poor academic performance. Poor academic performance was attributed to so many causes. Inadequate teachers, teaching and learning materials and absenteeism by both teachers and pupils are some of the causes of poor academic performance. Due to pressure at home and other activities after school, some children are not able to find time to learn and so they end up with poor academic performance. Unfortunately parents, teachers and their fellow pupils often chastise and/or tease those children with poor academic performance instead of helping them. They therefore prefer leaving school to learn some trade. Some parents also compound this situation by not caring very well for such children in school. They take it to be waste of money and resources.

Mining Activities

Illegal mining activities popularly called "Galamsey" has been cited as a factor influencing school dropout in the District. It is claimed that some students, especially those at the JSS level leave school to engage in these illegal mining activities so as to get quick money. Some of the dropouts interviewed gave the impression that it was better to engage in mining activities to earn income than wasting three years at the JSS especially if one was academically weak.

Truancy and Peer Group Influence

Due to the poor control exercised by parents over their children, some children become stubborn and refuse to listen to the advice of both parents and teachers. Such children often do not respect teachers and at times have some confrontation with them. Due to this behaviour, they do not find it interesting being in school. Some of these children leave school to join their friends to do menial jobs in cities such as Kumasi and Accra to earn some money.

Teenage Pregnancy

Teenage pregnancy was cited as one other cause of school dropouts in the district. In the Amansie West District, particularly in the communities studied, teenage pregnancy was a minor cause of school dropouts.

Recommendations and Conclusion

The study revealed some positive trends in terms of increasing enrolment and declining basic school dropouts in the study area. This was attributed to increased income as a result of diversification of income sources of parents.

The study also established that since majority of the parents of the dropouts (i.e. 45.4%) could be classified as extremely poor, it could be concluded that poverty was the main cause of school dropout in the district. This assertion was confirmed by the views of all the stakeholders of the educational sector in the district who were interviewed. Therefore if enrolment is to be increased

and the downward trend of school dropout maintained then the poverty levels of parents need to be reduced. The following recommendations are made to address these needs.

Poverty Reduction Initiatives

The District Assembly in collaboration with other organisations should endeavour to design and implement relevant pro-poor programmes and projects to reduce poverty in the district. Pro-poor programmes that would enable the poor to take up other off-season small-scale income generating ventures such as mushroom production, snail and grass cutter rearing, food processing, etc. could enable parents to earn more income. This is based on the assumption that when parents get additional income they will be in a better position to care for their wards in school.

Sustenance of Educational Campaigns

Whilst implementing pro-poor programmes the District's Education directorate in conjunction with other agencies should continue with the regular campaigns in the various communities to educate parents, guardians and the entire communities to deepen the awareness of the need for education. This will make parents place the education of their children among their top priorities.

School Based Counselling

Counselling groups should be established in almost all the schools in the district by school authorities. This group should comprise of teachers, parents, some pupils/students and opinion leaders. They should interact regularly with pupils and students to make them aware of the need to stay in school. Also, the group should explain and demonstrate the dangers associated with truancy and peer group pressure/influence to the children

Provision of Better School Infrastructure and Teachers

The stakeholders of basic education in the district including the District Assembly and the various communities should continue to improve upon school infrastructure. Dilapidated school structures should be repaired. More school libraries should be provided and stocked with reading materials. School workshops should also be provided in some of the schools in the district. Sporting items and equipments and furniture should also be provided. More teachers should also be provided. The District Assembly should sponsor more teacher trainees in colleges so that after graduation they could be bonded and posted to teach in the district for some time

Support for Needy Pupils

The District Assembly and the District Education Directorate in collaboration with some NGOs should endeavour to identify and support genuinely needy students. The establishment of an effective educational endowment fund to raise funds to care for needy children and also provide the needed facilities in the various schools in the district is one strategy to keep the needy children in school.

Strengthening of Parent Teacher Association (PTA)

The Parent Teacher Association in the various communities should be encouraged to ensure a constant interaction between parents and teachers in various schools and communities. This will enable teachers discuss issues affecting school children with their parents or guardians. Also unnecessary charges levied by schools as PTA dues should be rationalised. It is expected that if the issues raised as recommendations are considered it will go a long way to reduce further the school dropout rate in the Amansie West District.

REFERENCES

- Adjei A. (1982). Education and Development: A Challenge of our Time with Special Reference to West Africa. *West African Journal of Education*, Vol. XXIII Number 1, 2 and 3 Ibadan, Nigeria
- Annor, E. K. (1979). Aims and Principles of Education. Vol. I, Cita Press, Kumasi
- Brimer, M. A. and Pauli, L. (1971). Wastage in Education, a World Problem, UNESCO Press, Paris.
- Conable, B. (1988). Formal Education in Sub-Saharan Africa: Policies for Adjustment, Revitalisation and Expansion. The World Bank, Washington.
- Daily Graphic, (2002). "People's Daily Graphic" of Friday, February 22, 2002)
- Ghana Education Service. History of Education, in www.ghana.edu.gh.
- Ghana Vision 2020: (2000). The first step 1996-2000, Ghana Publishing Company Ltd., Accra
- GPRS (2003). Ghana Poverty Reduction Strategy 2003-2005, An Agenda for Growth and Prosperity, Volume I: Analysis and Policy Statement
- Kunfaa , E. Y. (1991). Social Infrastructure Planning in District Development, A paper in the series of Lecture notes (unpublished), University of Dortmund.
- Sir Percy Nunn (1960). Education: Its Data and First Principles, Edward Arnold Publishers Ltd. London
- UNESCO (1987). Glossary of Educational Technology Terms, UNESCO Press, Paris