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## ANALYSIS OF TRENDS IN GHANA'S SCHOOL-GOING POPULATION

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### ABSTRACT

*The structure of a population is of special interest to the educational planner who must be able to assess the relative size of school-age population. Analysis of trends in the school-going population is also necessary in planning for school facilities expansion.*

*Because the government of Ghana is committed to improving conditions in the basic education sector this study is set forth to establish some demographic characteristics in education pertaining to the issues of access, gender bias, level transition and teacher supply. The findings of the study can be used as a reliable substructure on which to base yearly evaluation of progress made.*

### Introduction

A good programme plan in the social service sector relies heavily not only on the structure of the population at need (Rossi, et al, 1979) at any point in time but also on trends in the movements of such populations over time. Population, in this paper refers to a well-defined group of human beings inhabiting a geographical area, such as a city, a district, a region, a country, a continent. etc. The term

may also be applied to sub-groups of human beings in those areas, such as all men above the age of 21, women of child-bearing ages, school-age children, etc. Interest in this paper is on the school-going population of Ghana on the eve of the Free and Compulsory Universal Basic Education programme. The crudest error an educational planner can make is to ignore, in whole or in part, the effects of demographic changes on plans for education (Chau, 1969).

On one hand, educational planners have to show interest in the composition or structure of the client systems at particular points in time. They have to know how clients are distributed by age, sex and occupation. A study of the actual current situations of human groups of interest is commonly referred to as *static* population study (Chau, 1969). Distribution by age and by sectors of economic activity, as well as the geographical distribution of populations are of special interest to designers of educational programmes for three reasons :

In the first place, planners of basic educational programmes must be able to assess the relative size of the school-age population (population age groups that could be in school) in order to identify target populations for various educational programmes of basic education and make adequate plans for the number expected in schools. The size of the school-age population provides the basis of planning for educational facilities expansion. It also provides the yardstick against which we can measure the extent of programme coverage at later dates.

Secondly, a fair estimation of manpower requirement for an economy is dependent on an accurate knowledge of the distribution of population according to sectors of economic activity and according to occupational types. Hence, educational planners need to know about occupational distribution of populations to determine target for technical and vocational education and to know how many to enrol for professional programmes (Owolabi, et al, 1991).

Thirdly, a study of the geographical distribution of populations is a *sine qua non* for planning the location of new schools and for expanding existing ones (Barclay, 1958; Chau, 1969; Hallak, 1977, Patwari, 1981; Owolabi, 1984).

On the other hand, interest in the study of population can be centred on trends in population or movement of populations. This is the *dynamic* aspect of population analysis. Population trend, which is dependent on such demographic events as marriages, births, deaths and migrations, have serious impact on educational planning. This is because the sizes of populations (and by implication, the sizes of target population for various programmes of education) keep changing over time, as a consequence of the combined effect of natality, mortality and migrations.

In the developing world ability to analyze trends in school-going populations is essential for the managers of the fast expanding educational systems who have to provide facilities and ensure regular inflow of adequate resources for education. Analyzing demographic data involves making a statistical description of population groups and seeking the causes behind demographic facts that may be revealed. Analysis of trends in school-going populations is the bedrock on which educational plans are laid. The people on whose shoulders rests the responsibility of providing schools and teaching resources for the school-age populations must therefore be equipped with a repertoire of techniques for describing the static

state of a population and analyzing statistical data on population movements.

### Objectives of Study

This is a study of trends in school-going populations at the basic level of education in Ghana. The government of Ghana recognizes basic education as the fundamental building blocks of a nation (MOE, 1996). It regards a participatory, literate citizenry as the foundation of economic growth, political stability and social well-being of a country. In recognition of this, the government is embarking on a bold plan to extend access to basic education to cater for all school-age children in Ghana by the year 2005, the goal being to ensure that all young people of today are adequately equipped with the fundamental knowledge and skills as well as the right attitudes that will enable them to participate actively in national development. It is also observed that the enrolment of girls is invariably lower than that of boys at all grades and levels of education in Ghana. The government desires to reduce gender differentials in Primary 6 completion and J.S.S.1 entry by 50 % by the year 2005 compared with the present level, (MOE, 1996a).

Finally, the quality of teaching and learning is observed to be very low. Evidence from recent assessments

indicate that increased funding of education at the basic level has not contributed in any way to improvement in the literacy and cognitive abilities of pupils (MOE, 1996a).

The quality of the present basic education in many schools is insufficient to impart sustainable literacy and knowledge, skills and habits required for full social and economic participation in society. As part of the intervention design to improve quality of teaching and learning, new teachers will be trained and old teachers will also receive in-service training in a re-structured system of teacher training.

It is expected that progress towards the achievement of the above stated goals will be evaluated on a yearly basis. This paper is set forth to establish trends in school-going population of Ghana at the basic level on the eve of the FCUBE programme. It is expected to set up the substructure on which to base yearly evaluation of progress. The study therefore has the objectives of setting up baseline data on *access to basic education*, *admission and level transition*, *gender balance* in primary and junior secondary schools and *teacher supply* at the two levels of education. Towards this end a cursory assessment of trends of pupil enrolments and teachers on roll at

the two levels is necessary. Analyses of growth rates, gross admission rates, gross enrolment rates, girls participation rates, and pupil / teacher ratio also need to be carried out.

To achieve the objectives of the study, the following research questions were raised :

***On access to basic education***

1. What were the trends in pupil enrolments at the primary and junior secondary schools in Ghana between 1988 and 1995 ?
  - a. What were the growth rates of enrolment at the two levels during the period ?
  - b. What were the Gross Enrolment Rates at the primary and junior secondary schools in Ghana between 1988 and 1995 ?
  - c. What were the Gross Admission Rates at the two levels of education during the study period ?

***On gender balance***

2. What were the participation rates of girls at the two levels of education during the period of study ?

***On transition rates***

3. What were the level transition rates of pupils from the primary level to the junior secondary level of education during the period ?
  - a. What were the level transition rates of girls during the period ?
  - b. What were the level transition rates of boys during the same period ?
  - c. Were there any differentials in the flow rates of boys and girls into J.S.S. 1 during the study period ?

***On teacher supply.***

4. What were the trends in teacher supply at the Basic Education Levels in Ghana between 1988 and 1995 ?
  - a. What proportions of the teaching staff were trained ?
  - b. What were the pupil / teacher ratios at the two levels over the same years ?

**Method**

Data were gathered from the records of the statistical division of the Ministry

of Education, Accra. These data were compiled from the returns of headteachers all over the country at the time of the study.

Data were also extracted from the Overview of the FCUBE Programme (a policy document of the Basic Education Sector Improvement Programme BESIP/GH, 1996). To be able to make analysis of trends, the relevant data for the last seven years were extracted from various Ministry records, collated and processed by manual computation, making use of rates and ratios as well as simple percentages. In a work like this, more refined measures such as age-sex-level-specific enrolment rates would be ideal, but data for such measures are hard to come by. Pupils are distributed by grade and not by age. Children of different ages are therefore found in each grade. There is no age-grade-system of schooling in this part of the world. The author therefore has to make do with gross rates. The limitation posed by this type of data gathered notwithstanding, it is still possible to study trends in the gross rate and plan for improvements. The findings were tabulated and discussed. Based on the results, suggestions were made on how to facilitate the achievement of goals in the FCUBE programme relating to trends in the school-going

populations at the basic level.

### Analysis of Data

There are four main areas of concern in this trend analysis. In each of the four areas one is interested in knowing what the trend has been and what the situation is at present. The four areas are : *access* to basic education, *gender differentials* at the basic level, level transition rates by gender and *teacher supply* at both levels of education. These four areas are well covered by the research questions. The treatment of data are therefore based on the research questions.

*Question 1.* What were the trends in pupil enrolments at the primary and junior secondary schools in Ghana between 1988 and 1995?

As can be expected under normal circumstances in a country with expanding population, there was a rising enrolment at the two levels over the years. Primary school enrolments expanded from about 1.7 million in 1988 to about 2.2 million in 1994, while the junior secondary school enrolments grew from about 608,690 in 1988 to about 714,544 in 1994. The growth rates ranged from 1.7% to 7.8% at the primary level and from 8.9% to 6.5% at the J.S.S. level. There were drops in the enrolment figures at the J.S.S. level in the years 1988 and 1990 which introduced negative growth rates (Table 1).

*Table 1*  
*Trends in Enrolments at the Basic Education levels Ghana 1988 - 1995*

Year	Primary Level		J.S.S. Level	
	Enrolment	Growth Rate (%)	Enrolment	Growth Rate (%)
1988/89	1694350	1.7	608690	-0.2
1989/90	1805258	6.5	625018	2.7
1990/91	1945422	7.8	569343	-8.9
1991/92	2011602	3.4	605760	6.4
1992/93	2047293	1.8	644976	6.5
1993/94	2112692	3.2	678797	5.2
1994/95	2180251	3.2	714544	5.3

*Sources :*

- Culled from :*
- 1) Ministry of Education, (1996a) *Basic Education Sector Improvement Programme/ Policy Documentation/GH* Accra : Author
  - 2) Ministry of Education, (1996b) *Records of the Statistical Division*, Accra : Author

*Table 2 :*  
*Gross Enrolment Rates (GER) of the Basic Education Levels, Ghana, 1988 - 1995.*

Year	Primary Level			J.S.S. Level		
	Population 6 -11 Years of age	Enrol.	Gross Enrol. Rate (%)	Population 6-11 Years of age	Enrol.	Gross Enrol. Rate %
1988/89	2,273,276	1,694,350	74.5	980,187	608,690	62.1
1989/90	2,383,611	1,805,258	75.7	1,012,238	625,018	61.7
1990/91	2,453,948	1,945,422	9.3	1,044,289	569,343	54.5
1991/92	2,544,281	2,011,602	79.1	1,076,340	605,760	56.3
1992/93	2,638,830	2,045,293	77.6	1,108,666	644,976	58.2
1993/94	2,738,517	2,112,692	77.1	1,140,635	678,797	59.5
1994/95	2,836,772	2,180,251	76.9	1,177,493	714,544	60.7

*Source :*

*Culled from :* Ministry of Education, (1996a). *Basic Education Sector Improvement Programme/Policy Document/GH*. Accra : Author.

Table 2 presents the Gross Enrolment Rates (GER) at both levels. The Gross Enrolment Rates rose from 74.5% in 1988 to 79.3% in 1990. Then it started to fall steadily, until it dropped to 76.9 in 1994. The actual enrolments became higher every year. But from 1991, the expansion in enrolments were not commensurate with the expansion of primary school-age population. At the J.S.S. level, GER were high up to 1989 (62.1% and 61.7%) as were the actual enrolments. It came down to 54.5% in 1990 and rose steadily to 60.7% in 1994.

*Question 2.* What were the participation rates of girls at the two levels of education during the period of study?

Table 4 presents an encouraging trend. There were gender differentials in school enrolments at the two levels of education alright. More boys than girls were enrolled at each level. But girls enrolments increased more rapidly over the years. For every 100 girls enrolled at the primary level about 125 boys were enrolled in 1988. The differentials in enrolment steadily declined to about 117 boys for every

Table 3 :

*Gross Admission Rates (GAR) at the Basic Education Levels, Ghana. 1988 - 1995*

Year	Primary Level			J.S.S. Level		
	6-Year-old	Enrolment	Gross Admission Rate(%)	12-Year-old	Enrolment	Gross Admission Rates(%)
1988/89	414,099	374,612	90.5	340,881	193,079	56.6
1989/90	432,089	389,147	90.1	351,338	200,541	57.1
1990/91	450,079	420,772	93.5	361,795	218,455	60.4
1991/92	468,069	415,255	88.7	372,252	232,387	62.4
1992/93	498,688	416,184	85.5	383,363	242,848	63.3
1993/94	555,885	422,635	83.5	395,471	251,533	63.6
1994/95	526,263	429,188	81.6	405,885	260,757	64.2

Source:

Culled from : *Ministry of Education, (1996a)*. BESIP/Policy Document/GH. Accra, : Author

Table 3 shows that the admission rates in primary schools declined over the years from 93.5% in 1990 to 81.6% in 1994. Conversely, it rose steadily from 56.6% in 1988 to 64.2% in 1994 at the junior secondary level.

100 girls in 1994. At the J.S.S. level 142 boys were enrolled for every 100 girls in 1988 and 1989. Girls participation rates slacked down in 1990 and then started to pick up again.



*Table 4*  
*Sex Ratios at the Basic Education Levels. Ghana. 1988 - 1995*

Year	Primary Level			J.S.S. Level		
	Female	Male	Male Per Female	Female	Male	Male Per Female
1988/89	711182	887261	124.8	251446	357244	142.1
1989/90	764064	939010	122.9	258188	366830	142.0
1990/91	879430	1065992	121.2	232135	337108	145.2
1991/92	918411	1093191	119.0	249571	356189	142.7
1992/93	940508	1106785	117.7	270846	374130	138.1
1993/94	985935	1152700	116.9	286458	389724	136.1
1994/95	998860	1155786	115.7	297392	393166	132.2

*Source :*

*Culled from :* (1) Ministry of Education, (1996b). *Records of the statistical Division*, Accra : Authors

(2) Ministry of Education, (1994). *Ghana National Forum on Basic Education*, Accra : Authors

By 1994 there were just 132 boys for every 100 girls. The gap was steadily closing up over the years.

*Question 3 .* What were the level transition rates of pupils from the primary level to the junior secondary level of education during the period?

The flow rates of pupils from the primary level to the junior secondary level, as presented in Figure 1 were going up and down during the study period. But on the whole, there appeared to be a downward trend. Almost all pupils in primary 6 moved into JSS 1 in 1989 and 1990. But in subsequent years about 9 out of 10 pupils moved from primary 6 to J.S.S. 1.

Figure 2 presents the flow rate of girls from Primary 6 to J.S.S.1. There was a steady decline in the flow rate ranging from 98% in 1989 to 89% in 1994.

Figure 3 shows that the flow rate of boys also declined, but the range between the highest and lowest rates was much higher. The highest rate for boys was 99% in 1990 and the lowest was 88.5% in 1994.

Clearly, there were gender differentials in the flow of pupils from the primary level to the secondary level, as can be seen in Table 5. The flow of females descended from 98% in 1989 to 89% in 1994. That of males were moving up and down between 99% and 88.5%

Figure 1

Flow rates of all pupils from primary 6 into J.S.S. 1, Ghana. 1988-1995

Year	Primary 6 Enrolment	JSS 1 Enrolment	Flow Rate (%)
1988/89	206792	-	-
1989/90	222706	200541	96.98
1990/91	251871	218455	98.09
1991/92	267689	23238	92.26
1992/93	276633	242848	90.72
1993/94	291692	251765	91.01
1994/95	302743	258711	88.69
1995/96	-	-	

Source:

MOE (1996b) Records of the Statistical Division Accra: Author

Figure 2

Flow rates of Girls

Year	Primary 6 Enrolment	JSS 1 Enrolment	Flow Rate (%)
1988/89	86801	-	-
1989/90	94341	85053	97.99
1990/91	108295	91323	96.80
1991/92	115643	98931	93.50
1992/93	120955	105184	90.96
1993/94	128269	109471	90.51
1994/95	134418	114028	88.90
1995/96	-	-	

Source:

MOE (1996b) Records of the Statistical Division Accra: Author

*Figure 3*  
*Flow rates of Girls*

Year	Primary 6 Enrolment	JSS 1 Enrolment	Flow Rate (%)
1988/89	119991	-	-
1989/90	128365	115488	96.25
1990/91	143576	127123	99.04
1991/92	152046	133456	95.95
1992/93	155678	137664	90.54
1993/94	1634233	142153	91.31
1994/95	168325	144683	88.53
1995/96		-	

Sources:

Culled from : (1) MOE (1996b) Records of the Statistical Division Accra : Author  
(2) MOE (1994) Ghana National Forum Accra: Author

*Table 5*  
*Gender Differentials in the Flow Rates from Primary 6 into*  
*J.S.S. 1. Ghana, 1988-1995.*

Year	Total Flow Rate	Girls Flow Rate	Boys Flow Rate	Gender Differentials
1989/90	96.98	97.99	96.25	-1.74
1990/91	98.09	96.80	99.04	+2.24
1991/92	92.26	91.35	92.95	+1.60
1992/93	90.72	90.96	90.54	-0.42
1993/94	91.01	90.51	91.31	+0.80
1994/95	88.69	88.90	88.53	-0.37

Sources :

Culled from : MOE (1966) Records of the Statistical Division Accra: Author  
MOE (1994) Ghana National forum on Basic Education Accra:  
Author

*Question 4.* What were the trends in teacher supply at the basic Education Levels in Ghana between 1988 and 1997?

Table 6 suggests that teacher supply was irregular over the period of study. Both trained and untrained teachers numbered 62,670 in 1988 and 72,451 in 1991 in the primary school.

*Table 6:*

*Trends in Teacher Supply at the Primary Level of Education, Ghana, 1988-1995*

Year	Total No Of Teachers	Growth Rate	Trained Teachers	Untrained Teachers	Percentage of Trained Teachers
1988/89	62,670	-	37,769	24,901	60.3
1989/90	62,859	+0.30	41,713	21,146	66.4
1990/91	62,823	-0.06	41,502	21,131	66.1
1991/92	72,451	+15.33	51,310	21,141	70.8
1992/93	67,760	-6.47	46,424	21,336	68.5
1993/94	69,232	+2.17	47,654	21,578	68.8
1994/95	71,863	+3.80	55,325	16,538	77.0

Sources :

Culled from : MOE (1996b) Records of the statistical Division, Accra :Author  
MOE (1994) Ghana National forum on Basic Education, Accra:  
Author

The trend in teacher supply at the Junior Secondary Level was similar. The number rose in a year and fell the following year up to 1993, with 30,708 in 1990 as the minimum and 37,382 in 1993 as the maximum number (See Table 7).

At the primary level the proportion of trained teachers increased from 60.3% in 1988 to 77.0% in 1994.

In the years 1990 and 1992 the number of trained teachers were a little lower than in the preceding years. By and large about two-thirds of the teachers in primary schools were trained up to 1993. There was a remarkable upsurge in the number and proportion of trained teachers in 1994 (See Table 6). There were

about 25,000 trained teachers at the J.S.S. level in 1988. Then the number dropped to 22,874 in 1989. Thereafter, the number steadily rose up to 28,405 in 1994. Trained teachers were more than two-third of the total number of teachers in J.S.S. and sometimes exceeded three quarters of the total. Teaching was more professionalised at the J.S.S level (see Table 7).

*Table 7*  
*Trends in Teacher supply at the J.S.S. Level, Ghana, 1988-1995*

Year	Total No of Teachers	Growth Rate	Trained Teachers	Untrained Teachers	Trained Teachers as % of Total Teachers
1988/89	34,962	-	24,844	10118	71.06
1989/90	35,262	+0.86	22,874	12388	64.87
1990/91	30,708	-12.90	23,303	7405	75.89
1991/92	34,249	+11.53	24,544	9705	71.66
1992/93	33,824	-1.24	25,473	8351	75.31
1993/94	37,382	+0.52	27,823	9559	74.43
1994/95	37,441	+0.16	+01.16	9036	75.87

*Sources :*

Culled from : MOE (1996b) Records of the statistical Division, Accra :Author  
MOE (1994) Ghana National forum on Basic Education, Accra:  
Author

*Table 8*  
*Pupil - Teacher Ratios at the Primary Level Ghana, 1988-1995*

Year	Enrolment	Teachers	Pupil/ Teacher	Trained Teacher	Pupil/Trained Teacher
1988/89	1,694,350	62670	27.04	37769	44.86
1989/90	1,805,258	62859	28.72	41713	43.28
1990/91	1,945,422	62823	30.97	41502	46.88
1991/92	2,011,602	72451	27.77	51310	39.21
1992/93	2,047,293	67760	30.21	46424	44.10
1993/94	2,112,692	69232	30.52	47654	44.33
1994/95	2,180,251	71863	30.34	55325	39.41

*Sources:*

Culled from: Tables 1 and 9 above

Table 8 illustrates that at the primary level the pupil/teacher ratios were generally lower than 30 for four years (1988/89 to 1991/92) and the ratio hovered around 30 for the remaining years. If we consider trained teachers only the pupil-teacher ratios alternated between 39 and 47. The ratios were much less and more stable at the J.S.S. level. The deviation from 18 was never more than 1. As for pupil/trained teacher ratio, the lowest was 24.40 in 1993 and the highest was 27.32 in 1989. There were 25.1 pupils to a trained teacher on the average. That was not bad at all.

discussion centres around the four main issues of the research. These are issues of *access to basic education*, *gender bias* in participation, *level transition* and *teacher supply*.

#### i) Access to Basic Education

As in all other developing countries the school-age population in Ghana is expanding every year (Table 2). School enrolments also expanded, from about 1.7 million in 1988 to about 2.2 million in 1994. The Gross Enrolment Rate was 74.5% in 1988 and 76.9% in 1994. The laudable

Table 9  
Pupil-Teacher Ratios at the JSS level Ghana 1988

Year	Enrolment	Teachers	Pupil/ Teacher	Trained Teacher	Pupil/Trained Teacher
1988/89	608,690	34962	17.42	24844	24.50
1989/90	625,018	35262	17.73	22874	27.32
1990/91	569,343	30708	18.54	23303	24.43
1991/92	605,760	34249	17.69	4544	24.68
1992/93	644,976	33824	10.07	25473	25.32
1993/94	678,797	37382	18.16	27823	24.40
1994/95	714,544	37441	19.09	28405	25.16

Source :

Culled from: Tables 1 and 7 above.

### Discussions

in Ghana, are discussed below. The Planning implications of the population trends at the basic levels of education

efforts of the government to expand enrolment seemed to be undermined by the rapidly expanding base of the population pyramid. This is more noticeable in Table 3 where the new

entrants of 414,099 constituted 90.5% of the primary school-age population in 1988, but the new intakes of 525,263 in 1994 represented only 81.6% of the primary school-age population. The planning implication of the trend is that population figures will keep expanding and school clients will expand at a faster rate. With a crude birth rate of 43 births per thousand population, the six year-olds will grow in number every year. Some of the older children who missed the chance at age six may also be coming back into the system at different points in time unless the age-grade system is instituted by law.

This may lead to an unexpected upsurge in enrolment. An implication of such a situation is that basic educational planners could be caught unawares, especially in the area of resource projections, which have always been the bane of plan implementation. The ministry could, once again, experience the embarrassment of having insufficient resources (classrooms, teachers and materials) to cope with an incidental upsurge in the number expected in Primary 1.

The pattern of access was not much different in JSS. After the first three years, pupil enrolments, GER, and GAR started rising but at a very slow rate. The admission rates of the 12-year-olds of 64.2% in 1994 was still too low for the achievement of set goals.

It is tempting to use level transition rates to plan for junior secondary education. But achieving the objective of junior secondary education is going to be an Herculean task because it will not only require increasing level transition rate to 100% but also eliminating wastages in the form of drop-outs from primary schools, if all the children of basic school-age are to be given access to basic education by the year 2005.

#### ii) *Gender Differentials*

There is a trend towards gender balance in school participation rates at the basic level in Ghana (Table 4). If the objective of universalizing primary education and eliminating wastages by the year 2005 is achieved there would be no gender bias. But the ministry has set a target of reducing gender differentials in Primary 6 completion and JSS 1 entry by 50% by the year 2005 compared with the present level. The flow rates from primary 6 into JSS 1, have been falling for both sexes over the years (see figures 2 and 3 above). In 1994 it was 88.90% for girls and 88.53% for boys. The difference is negligible. What appears to be important to note is that, the planning to reduce wastage and increase the flow rate must not be sex-biased. There is no sound evidence from the results of this study that girls tend to rush into marriage and boys tend to progress into JSS after their primary education. If there were such practices in localized districts of

some regions, the effect is not noticeable in the macro-analytic framework. Gender bias was prominent in the past and the effect of the imbalance at the various grade levels will linger on till the present cohort of basic school pupils are out of the system. New plans must ensure that girls admitted to Primary 1 are not less than the boys to be admitted. In other words efforts should be made to ensure that all 6-year-old girls are registered and retained in school.

### iii) *Transition rates*

Even though enrolments at JSS 1 kept expanding during the study period, the yearly increase was not commensurate with the yearly increase in primary 6 output. This was so for both sexes. The implication is that a more vigorous effort will be required to expand junior secondary school facilities and resources, (class rooms, teachers and materials) if set goals are to be achieved.

### iv) *Teacher supply*

This study shows that the number of teachers at both primary and secondary schools in Ghana fluctuated over the study years, maintaining a steady increase only in the last three years. About two-thirds of the teachers in the primary schools were trained, while about three-

quarters of those in junior secondary schools were trained. The ratio of about 30 pupils to 1 teacher was quite normal in primary schools. At the JSS level the ratio of 18 pupils to 1 teacher was rather too low. Planning implications are that enrolments at that level could be expanded considerably with minimum increase in teacher supply. Emphasis should be on teaching spaces and teaching materials.

To improve quality of the education imparted and to acquaint teachers with new methods and re-orient them toward the objectives of the new FCUBE programme, it is necessary to train new teachers and retrain existing ones through seminars, workshops and short inservice courses. These strategies are required since the low pupil-teacher ratio of 18 to 1 at the JSS level did not appear to have positive impact on quality of education, judging from the performances of the 1988/89 and 1989/90 cohorts at the Senior Secondary School certificate examinations. Inadequacy in the number of teaching personnel may not have been a significant cause of poor examination results. The causes appear to have been embedded in other factors.

## **Conclusions and Recommendations**

This study has established the need for knowing how to analyze trends in the



school-going population at the basic level in order to be able to make an accurate forecast of future enrolments and make adequate plans for the number expected in schools. If we are to quantify and rationalize educational plans, we must be able to analyze trends in the population data of the present and potential clients of the school system.

This study has also established a necessity for creating baseline data against which to assess progress made at any subsequent period during plan implementation. After setting the bench mark against which to assess any effort made to move towards the attainment of set objectives, studies of this nature should be conducted periodically to detect lags between planning and implementation.

To extend access to all children in Ghana by year 2005, it is necessary to project the six -year-olds for the plan period and inflate the numbers for latecomers who may decide to participate in basic education at different points in time. It is of equal necessity to plan to provide enough teaching resources for the projected numbers, remembering that expansion of classrooms and building of new schools have to be planned well ahead of the time of need.

There should be equal intake of girls and of boys into Primary 1. Gender balance must be geared towards eliminating gender differentials in wastage ratios.

Provision must be made to expand resources significantly for JSS and machinery must be set in motion to assess the transition rates from year to year.

Teachers time appeared to have been slightly underutilized at the JSS during the study period. If other complimentary factors are suitable a pupil/teacher ratio of 24:1 at the JSS level cannot lower the quality of teaching. While ensuring that sufficient number of teachers are trained for the expected upsurge in enrolment, arrangements should be made to retrain old teachers so that objectives of the new national policy on FCUBE could be realized. The University College of Education of Winneba as well as the Faculty of Education of U.C.C. could be strengthened to coordinate such retraining.

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