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Multi-Site Teacher Education Research Project

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Ghana: a Baseline Study of The Teacher Education System

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Multi-Site Teacher Education Research Project (MUSTER)

MUSTER is a collaborative research project co-ordinated from the Centre for International Education at the University of Sussex Institute of Education. It has been developed in partnership with:

- The Institute of Education, University of Cape Coast, Ghana.
- The Institute of Education, The National University of Lesotho.
- The Centre for Educational Research and Training, University of Malawi.
- The Faculty of Education, University of Durban-Westville, South Africa.
- The School of Education, The University of the West Indies, St. Augustine's Campus, Trinidad.

Financial support has been provided for three years by the British Department for International Development (DFID).

MUSTER is focused on generating new understandings of teacher education before, during and after the point of initial qualification as a teacher. Its concerns include exploring how new teachers are identified and selected for training programmes, how they acquire the skills they need to teach effectively, and how they experience training and induction into the teaching profession. The research includes analytical concerns with the structure and organisation of teacher education, the form and substance of teacher education curriculum, the identity, roles and cultural experience of trainee teachers, and the costs and probable benefits of different types of initial teacher training.

MUSTER is designed to provide opportunities to build research and evaluation capacity in teacher education in developing countries through active engagement with the research process from design, through data collection, to analysis and joint publication. Principal researchers lead teams in each country and are supported by three Sussex faculty and three graduate researchers.

This series of discussion papers has been created to provide an early opportunity to share output from sub-studies generated within MUSTER for comment and constructive criticism. Each paper takes a theme within or across countries and offers a view of work in progress.

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ACRONYMS

BECE	Basic Education Certificate Examination
BESIP	Basic Education Sector Investment Programme
CIDA	Canadian International Development Agency
CRDD	Curriculum Research and Development Directorate
CRIQPEG	Centre for Research into Improving Quality Primary Education in Ghana
CRT	Criterion Reference Test
DACF	District Assembly Common Fund
DFID	Department For International Development, UK (formerly ODA)
ERP	Economic Reform Programme
ERRC	Education Reform Review Committee
EU	European Union
FCUBE	Free Compulsory and Universal Basic Education
GES	Ghana Education Service
GLSS	Ghana Living Standards Survey
GNAT	Ghana National Association of Teachers
GOG	Government of Ghana
GTZ	German Technical Cooperation Agency
IDA	International Development Association
JICA	Japanese International Cooperation Agency
JSS	Junior Secondary School
JuSSTEP	Junior Secondary School Teacher Education Research Project
MOE	Ministry of Education
MTEF	Medium Term Expenditure Framework
NTQ	Newly Qualified Teacher
ODA	Overseas Development Agency, UK (now DFID)
PBME	Planning Budgeting Monitoring and Evaluation
PPA	Participatory Poverty Assessment
PREP	Primary Education Programme
PSDP	Primary School Development Project
PTA	Parent Teacher Association
PTR	Pupil-Teacher Ratio
SSCE	Senior Secondary Certificate Examination
SSS	Senior Secondary School
TED	Teacher Education Directorate
TTC	Teacher Training College
UNICEF	United Nations Children's Fund
USAID	United States' Agency for International Development
WSD	Whole School Development

ABSTRACT

This paper outlines the present state of teacher education, including an historical overview, teacher supply and demand, current patterns of curriculum and organisation for pre-service training, an estimate of the costs involved, and a discussion of key policy issues and the emerging research agenda.

CHAPTER ONE

BASIC EDUCATION IN GHANA: AN OVERVIEW

1.1 Introduction

This chapter provides an overview of basic education in Ghana. It describes the structure of basic education, trends in enrolment and participation, patterns of expenditure across educational levels, and key policy reforms. Issues concerning the quality of teaching and learning are discussed highlighting the importance of teachers and teacher education. The background information contained in this chapter informs the critical analysis of the Ghanaian teacher education system in subsequent chapters, and, in particular, an evaluation of its role in the development and improvement of basic education.

1.2 National Indicators

Ghana is a low-income country, with a population of 18 million of whom 34 per cent live below the poverty line.[1] Per capita income in 1997 was US$ 370 ($1790 PPP). Population growth averaged 2.7 per cent between 1990 and 1997, and over 44 per cent of Ghana's population is under 15 years old. Coupled with a low average income per head, this puts a strain on public provision of resources for education, health, water and sanitation services. Most of the population lives in rural and semi-rural areas - 63 per cent - and agriculture provides over 60 per cent of all employment. Life expectancy at birth is 57 years. Adult illiteracy is estimated at 36 per cent and is greater among women than men - 47 per cent compared with 24 per cent (World Bank, 1998a).

Since the introduction of Ghana's economic reform programme in 1983, its annual growth has been higher than most other countries in sub-Saharan Africa (SSA), averaging 4.3 per cent between 1990 and 1997 (World Bank, 1998a). Ghana has adopted the goal of becoming a middle income country by 2020 based on the experience of countries that have made the successful transition to sustainable economic growth through promotion of human resource development.[2] Investment in human resources, through the expansion and strengthening of basic education, is a central feature of Ghana's economic and social development strategy to accelerate economic growth and reduce poverty.

1.3 Recent History of the Basic Education System

Since the 1950s Ghana has made a number of attempts to reform the education system put in place by the British colonial administration, driven by the desire to make it more relevant to her needs as a developing country. In 1951 an Accelerated

[1] The poverty line is based on two-thirds of average income set by the *Ghanaian Living Standards Survey* in 1988.
[2] See *Ghana Vision 2020*, Government of Ghana, 1995.

Development Plan sought to expand access to education. Following independence from Britain in 1957, the Government of Ghana's strong commitment to developing human resources was consolidated by the 1961 Education Act that made education free and compulsory at the basic level. By 1970 Ghana had one of the most highly developed education systems in West Africa (EIU, 1996:16).[3] Gross enrolment ratios increased dramatically, 60 per cent of teachers in primary schools were trained, and the Ministry of Education (MOE) projected that all untrained teachers would be eliminated from the education system by 1975 (Konadu, 1994:12).

The late 1970s and early 1980s, however, saw a sharp economic decline during which GNP per capita fell by 23 per cent between 1975 and 1983. The real value of government financing for education fell sharply from 6.4 per cent of GDP in 1976 to 1.4 per cent in 1983, and resulted in near collapse of the education system. Teachers were not paid promptly, there was little supervision or inspection, schools were in disrepair, and there were inadequate textbooks and instructional materials (Nti, 1997:5; World Bank, 1996:2). The deteriorating economic climate and working conditions prompted an exodus of trained teachers to find better paid work in other countries. Untrained teachers were employed to avoid disintegration of the education system, and in sharp contrast to the predictions of the early 1970s, by 1982 the percentage of trained primary school teachers had fallen to less than 50 per cent (Table 1).

Table 1.1: Primary Schools, Enrolment and Teachers, 1974/75 – 1982/83

Year	No. of Schools	Total Enrolment	No. of Teachers	% of Trained Teachers
1974/75	6886	1051012	35334	81.3
1975/76	6966	1157303	38381	77.2
1976/77	7248	1213291	40807	72.7
1977/78	7229	1246480	45119	63.9
1978/79	7658	1295525	48397	59.3
1979/80	7750	1335463	48146	56.7
1980/81	7848	1377282	47921	53.9
1981/82	8082	1434573	50685	51.3
1982/83	8395	1482090	55528	49.6

Source: GES 1991 in Avotri *et al.*, 1999:10

Yeboah (1990) summarises the status of the Ghanaian education system in the early 1980s in five points:

1. In many schools, school children and teachers were without textbooks and stationary items as a result of foreign exchange constraints.

[3] Recurrent government expenditures on education averaged 24 per cent of the total recurrent budget in the early 1970s, substantially higher than the average figure of 17 per cent for other West African countries (World Bank, 1985 in Glewwe and Ilias, 1996:397).

2. Building, furniture and equipment had deteriorated as a result of lack of replacement and repair - enrolment levels had declined over the years while dropout rate from the school system continued to rise.
3. There was an exodus of significant numbers of trained and highly qualified teachers. This had led to the recruitment of untrained teachers in primary schools resulting in less effective instruction at the Basic Education level.
4. Government's finance towards education had drastically reduced.
5. There was no data and statistics on which to base any planning.

Thus, despite a steady rise in the number of primary schools, enrolments and teachers between 1974 and 1982, the quality of the education system declined.[4]

The severity of Ghana's economic problems peaked in 1983 at which time the Government of Ghana launched the Economic Recovery Programme with financial assistance from the World Bank and international donor agencies. As an integral part of its plan for economic recovery, the government initiated the 1987 Education Reform Programme (ERP) to reverse the decline in the education system. Its major goals were to expand access to basic education, improve the quality of basic education, make education more relevant to Ghana's socioeconomic needs, and ensure sustainability of the reform programme after the economic adjustment period (MOE, 1994:13). The main elements of the reform programme were:

- reduction in the length of pre-university education from 17 to 12 years, and its restructuring into a 6-3-3 system;
- introduction of new curricula designed to be more relevant to the needs of the labour market across all educational levels;
- raised entry requirements for teacher trainees, initiation of a programme to replace unqualified teachers, and introduction of in-service teacher training; and,
- mobilisation of local community participation in the provision of basic education (DFID, 1998:68; World Bank 1996:2).

The Education Reform Review Committee (ERRC) was set up in 1994 to review the achievements of the 1987 ERP. It found that although the ERP had achieved increases in enrolments and improvements in school facilities, teaching and learning outcomes remained poor. Specifically, it identified the following weaknesses:

- continued decline in the quality of education;
- overloading of the curriculum;
- insufficient vocational and practical orientation of the curriculum;
- lack of facilities to achieve required teaching and learning outcomes; and
- inefficient allocation and management of resources.

The overarching message of the 1994 ERRC was that was that the expansion of access to basic education and increases in physical inputs could not be sustained unless accompanied by improvements in teaching and learning in schools. In response, the GOG sought to address this issue in its FCUBE Programme, prepared in 1994. This promised Free, Compulsory and Universal Basic Education by the year

[4] Using data from the Ghana Living Standards Survey 1988-89, Glewwe and Ilias (1996) find that after controlling for years of schooling, older Ghanaians score higher on mathematics and English tests than younger Ghanaians. They suggest that this is due to the deterioration in educational quality in the early 1980s.

2005, and was in fulfilment of the requirement of Article 38 (2) of the 1992 Constitution of the Fourth Republic of Ghana which states:

> The Government shall, within two years after Parliament first meets after coming into force of this Constitution, draw up a programme for implementation within the following ten years, for the provision of free, compulsory and universal basic education.

fCUBE[5] was launched in 1996 and designed to address the weaknesses of the 1987 ERP in two five-year phases from 1996 to 2005. It has three main goals:

- improved access to, and participation in basic education with a specific focus on girls and the poor;
- enhanced quality of teaching and learning outcomes; and,
- improved efficiency in the allocation, management and utilisation of fiscal, material and human resources in the education system (MOE, 1994).

Key elements include improvements to access through the rehabilitation and construction of school facilities, the fostering of full-scale community ownership and management of schools, and measures to increase education participation by girls and disadvantaged children. Other strategies to increase access and participation include the adoption of targets for the reduction of drop out and repetition rates and a social marketing campaign to promote education. Measures to improve the quality of teaching and learning include redesigning of pre-service and in-service training programmes to ensure well-qualified teachers, curriculum review and development, and the more adequate provision of instructional materials. The management efficiency component of the programme involves decentralisation and district capacity building, more effective monitoring, supervision and evaluation of education sector programmes and activities, and more efficient financial and personnel management.

The fCUBE programme is strongly supported by a World Bank credit, the Basic Education Sector Improvement Programme (BESIP). BESIP was established with the aim of translating the fCUBE objectives into an operational plan. Due to the size and complexity of fCUBE, the GOG has been working on its implementation with a number of development partners, including USAID, DFID, EU, GTZ and JICA, in a joint MOE-donor forum.

The scale of fCUBE has not made it easy to prioritise implementation strategies. It is much clearer on its goals rather than the processes of implementation to achieve these objectives. It is now apparent that the timetable for the overarching goal and components of FCUBE cannot be met. This has prompted examination of fCUBE's implementation. Attention has come to focus on two key factors: (i) the mainstreaming of the fCUBE programme within the normal functions of the MoE and its agencies; and, (ii) the proper utilisation of resources at the local district level where they have the greatest impact on the practice of schooling (DFID, 1998).

[5] 'FCUBE' became 'fCUBE' when the Government sanctioned the charging of schools fees for certain items (e.g. school books) in 1993.

1998 saw the emergence of a planning approach called Whole School Development (WSD) that seeks to address the implementation constraints of fCUBE. This was first piloted with support from DFID, and is the MOE's preferred implementation strategy to achieve fCUBE's objectives across Ghana. Under WSD, schools and districts are to become responsible for their own planning and budgeting, and accountable for their performance. This is in line with the move towards decentralisation of education outlined in the original fCUBE policy document. It is not clear at the time of writing how WSD will impact on initial teacher education, if at all. This requires further investigation.

Although no large-scale evaluation of the recent educational reforms in Ghana has been conducted evidence from a handful of small-scale studies suggests that their impact has been disappointing. An evaluation of the World Bank supported Primary School Development Project (PSDP) in 1999, for example, revealed problems of teacher absenteeism, loss of instructional time, poor instructional quality, poor management and instructional lapses, and inadequate textbooks in schools as limiting the impact of reform inputs (Fobih *et al*., 1999). Most elements of the reform programme, other than structural change to pre-university schooling, still remain on the agenda and have failed to be implemented successfully. This conclusion is supported by the recent *Ghana Education Sector Support* Report by DFID (1998:68) which states:

> During this time [1987-1998] there have been few significant gains in either access to, or quality outcomes from, the education system. Explanations for the slow rate of change would include (a) a lack of commitment to change among education professionals, (b) underestimation of the extent of institutional change required and the necessary time to effect the changes, (c) lack of accountability at all levels of the system, (d) lack of an agreed and integrated approach to the reform programme, and (d) [sic] continuing growth of the school-age population, and (e) lack of focus in the contribution of external funding.

fCUBE is now in its fourth year of implementation, and although available data, at best, relates to its first two years only, some preliminary assessment of the programme is possible. The current status of the education system within the context of fCUBE objectives is presented in the remainder of this chapter.

1.4 Structure and Characteristics of Basic Education

Schools in Ghana are established by local authorities, Christian or Muslim organisations. Historically churches constructed and managed most schools, but in 1955 the running of most schools was taken over by the government. Although there remain Catholic, Baptist, Presbyterian, Anglican and Muslim educational units in the Ghana Education Service, the management and financing of all schools is controlled by district and central educational authorities.

Prior to 1987, the Ghanaian education system consisted of a six year primary cycle; a four year middle; a seven year secondary (the first five years leading to the 'O' level certification and the last two leading to 'A' level); and a three or four year tertiary. It was the norm for tertiary students to have spent up to 17 years on pre-university education (World Bank, 1996:2). The structure of Ghana's education system prior to 1987 is shown in Appendix 1a.

The 1987 reforms brought changes to the education system resulting in the present structure as shown in Appendix 1b. Under the new system Ghana's basic education cycle consists of six years of primary and three years of junior secondary schooling. This is followed by a three-year senior secondary cycle, and a tertiary sub-sector comprising several forms of technical institutes, universities, polytechnics, and teacher training colleges. The new system replaced the old completely after the academic year 1995/96, when the last cohort under the old system graduated. The basic education cycle is nominally compulsory, and children are supposed to enter primary school at the age of six. There is automatic promotion throughout primary school and JSS, using internal examinations, except for pupils with weak performances or poor attendance, who repeat with parental consent. External examinations occur only in the final year of JSS.

In the primary school, nine subjects are studied: English, mathematics, science, agriculture, social studies, life skills, Ghanaian language, cultural studies, and physical education. Lower primary classes (grades one to three) are officially taught in the Ghanaian language prevailing in the local community; for primary grade four and beyond, English is the language of instruction.

For most pupils JSS is terminal. JSS is expected to equip the majority, therefore, with basic skills to enter the labour market, and to prepare the minority for continued study at senior secondary level. To meet these dual objectives, JSS curricula have been restructured, and new teaching and learning materials developed for thirteen subjects - technical and pre-vocational skills training have been added to the core primary subjects, with French as an elective course (World Bank, 1996:3).

It is generally agreed that the basic curriculum is too heavy with too many subjects and examinations. As Penrose (1996: 4-5) observes,

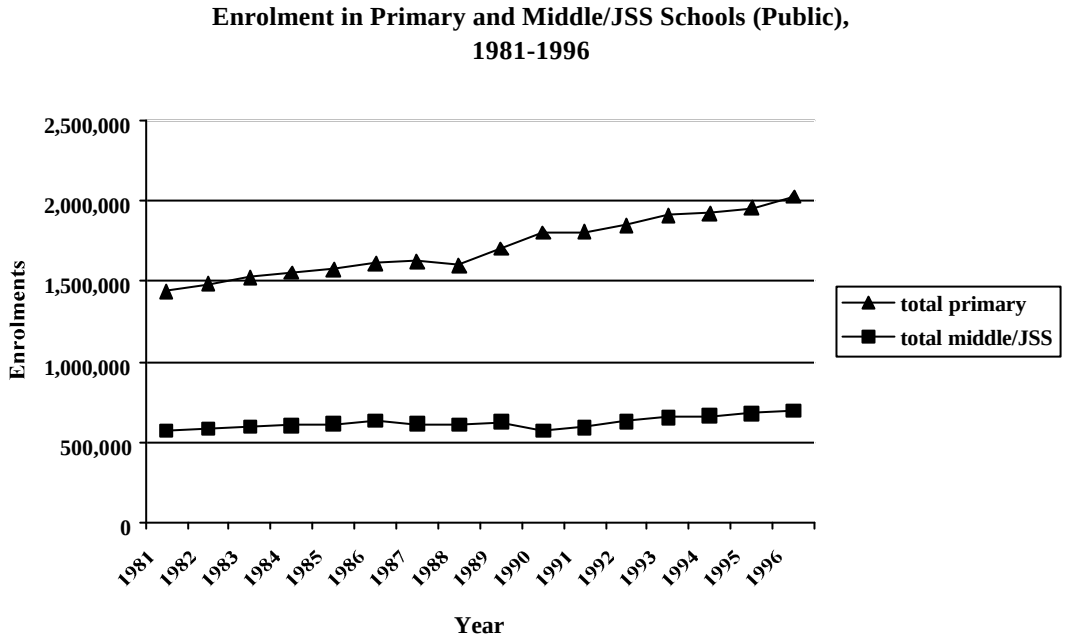
> There appears to be a consensus that there are too many subjects at the basic level, and that they should be reduced from the present nine subjects at primary to five or six; and from the present JSS total of 13, of which 12 are nationally examined, to 12 with national examination in 10.

1.5 Participation in Basic Education

Total enrolments in basic education have increased since the announcement of the 1987 reforms. In 1996 there were 11,765 public primary schools, and 1,249 private primary schools; at the junior secondary level, the figures were 5,597, and 283, respectively. Between 1988 and 1996, public primary enrolments grew by over 26 per cent from 1,598,443 to 2,027,183, at an average annual rate of 2.5 per cent. Over the

same period total enrolment in private primary schools increased much more rapidly, by over 125 per cent, from about 134,000 to over 306,000 (World Bank, 1996; MOE, 1998). Primary enrolments in private primary schools comprise 11 per cent of all primary enrolments. Between 1988 and 1996 total enrolments in public junior secondary schools grew by about 14 per cent, from 608,690 to 695,468. In 1996 total enrolment in private JSS was 42,589, about 6 per cent of total JSS enrolments. The pattern of total enrolments in public primary and middle/JSS schools between 1981 and 1996 is shown in Figure 1, and actual total enrolment figures are presented in Appendix 2, Tables A2a and A2b.

Figure 1: Enrolment in Primary and Middle/JSS Schools (Public), 1981-1996



Source: Planning, Budgeting, Monitoring and Evaluation Division, MOE, Republic of Ghana, 1998

Despite an absolute increase in primary enrolments since the late 1980s, the rate of increase has failed to keep pace with the growth of the school age population. Population growth averaged 3.3 per cent between 1980 and 1990, and 2.7 per cent between 1990 and 1997 (World Bank, 1998). This has resulted in a gradual decline in the participation rate such that nationally one child in three is not attending primary school (DFID, 1998:69). Participation rates for primary and JSS schools are presented in Table 1.2.

Table 1.2: Participation as Percentage of Eligible Population, Primary and JSS, 1992-1996

	1992/93	1993/94	1994/95	1995/96	1996/97
Primary	70	70	68	66	66
Junior Secondary	57	56	56	56	57

Source: MOE Education Strategic Plan 1998-2003, 1998: Annex 1

The primary participation figures presented in Table 1.2 are very close to the average for sub-Saharan Africa which has an average primary gross enrolment ratio of 67 per cent. The national figures, however, hide regional and urban-rural disparities. For example, primary gross enrolments in Upper East and Upper West regions in 1992 were 46 and 54 per cent, respectively. In these regions there is little indication of recent improvement (DFID, 1998:69).

The average dropout rate for primary pupils across all grades in 1996/97 was 3.6 per cent, and highest in the first grade at 7.1 per cent. In the same year, repetition at the primary level averaged 4 per cent. As with dropout, repetition in primary school is most common in the first grade at 7.2 per cent, and the percentage of primary pupils repeating has increased steadily since 1991 (see Appendix 3, Tables A3a and A3b). Primary school completion figures for 1994 estimate that of those who enrol in the first grade of primary school about 25 per cent fail to complete the primary cycle (World Bank, 1996:2). See Table 1.3.

Table 1.3: Basic Education System Outcome Indicators, 1991-1994

Year	Completion rate for 6 year primary education (%)	Completion rate for 3-year junior secondary education (%)	Completion rate for 9-year basic education (%)	Transitional (pass) rate of primary school graduates to JSS (%)	Transitional (pass) rate of JSS graduates to SSS (%)
1991	70.0	82.8	50.5	96.8	35.3
1992	70.1	82.8	51.0	93.9	33.8
1993	72.1	82.6	54.3	95.0	34.8
1994	75.4	82.4	56.8	94.5	-

Source: MOE 1995 in World Bank 1996

In 1994 the transition rate from primary to junior secondary was 94.5 per cent for those pupils completing primary school. Although the percentage of pupils completing basic education steadily improved between 1991 and 1994, by 1994 only 57 per cent of students completed basic education.

Girls' enrolment as a proportion of total enrolments improved at the primary level from 44.6 to 46.3 per cent between 1987 and 1996, and at the JSS level from 41.3 to 43.7 per cent over the same period (Table 1.4).

Table 1.4: Girls' Enrolment as Percentage of Total, Primary and JSS, 1987-1996

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
primary	44.6	44.5	44.9	45.0	45.5	45.7	45.9	46.1	46.2	46.3
JSS	41.3	41.3	41.3	40.8	41.1	41.8	42.2	42.8	43.2	43.7

Source: Planning, Budgeting, Monitoring and Evaluation Division (PBME), MOE, Republic of Ghana, October 1998

These national statistics, however, mask the existence of much greater differences in some parts of the country, particularly in the north, where in 1992 (the latest year for which regional gender disaggregated data are available) girls comprised only 35 per cent of primary enrolments and as little as 25 per cent of junior secondary (World Bank, 1996:9). There is also a clear pattern of girls' enrolment as a proportion of total enrolments falling with successive grades of primary and junior secondary schooling (Table 1.5).

Table 1.5: Basic Enrolment by Grade and Gender, 1994/95

Grade	Boys	Girls	Total	Girls as % of total
P1	199,995	179,705	379,700	47.3%
P2	179,855	158,211	338,066	46.8%
P3	174,092	151,360	325,452	46.5%
P4	169,090	143,843	312,933	46.0%
P5	158,,800	131,547	290,347	45.3%
P6	153,516	120,789	274,305	44.0%
Primary Total	**1,035,348**	**885,455**	**1,920,803**	**46.6%**
JSS1	137,913	107,607	245,520	43.8%
JSS2	126,319	94,557	220,876	42.8%
JSS3	113,085	80,370	193,455	41.5%
JSS Total	377,317	282,534	659,851	42.8%
Basic Total	**1,412,665**	**1,177,989**	**2,590,654**	**45.5%**

Source: PBME, MOE (1996)

The direct and indirect costs of schooling discourage poor families from sending their children, particularly girls, to school. In 1993, the MOE sanctioned the charging of fees by schools for textbooks. In addition to these charges, district authorities and parent teacher associations, which now have more responsibility for education, levy their own fees. Parents/guardians are asked to pay for exercise books, stationery, school uniforms, lunch, transportation, and other furniture and equipment. The direct costs of schooling are perceived as having risen rapidly in comparison to capacity to pay. The majority of Ghana's population lives in rural areas where generally families are poorer, and school-age children contribute to family income through productive and domestic activities. For a family to send all its children to school may constitute a loss in family revenue. The opportunity cost of education for girls, in particular, may be high where they are needed for household and child-care responsibilities. Also, parents' perceptions of boys' superior returns to education, and traditional early marriages in some parts of the country contribute to the incidence of lower enrolment among girls (Norton et. al, 1995; World Bank, 1996).

1.6 Pupil-Teacher Ratios

Aggregate pupil-teacher ratios (PTRs) in Ghana are generous by international standards in developing countries, and in 1996 were 32 and 21 for primary and JSS, respectively. The PTR is a crucial indicator of how the costs of providing education services are being influenced. Projections from the 1998 MOE *Education Sector Strategic Plan*, indicate a clear government commitment to steadily increase PTRs in primary and JSS schools to 35.2 and 22.7 by 2003. See Table 1.6.

Table 1.6: Projected Pupil-Teacher Ratios at Primary and JSS Levels, 1998-2003

	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
primary	33.7	33.9	34.3	34.6	34.9	35.2
JSS	21.2	21.5	21.8	22.1	22.4	22.7

Source: Education Sector Strategic Plan 1998-2003, MOE, 1998

National PTRs, however, hide large disparities in class sizes, with some urban primary schools having classes as large as 80 children, while many rural schools have classes of less than 20. Average regional PTRs provide some indication of variation by geographical location (Table 1.7).

Table 1.7: Average Regional Primary Pupil-Teacher Ratios, 1997

Region	**Average PTRs**
Ashanti	31.3
Brong Ahafo	26.4
Central	36.1
Eastern	28.5
Greater Accra	40.0
Northern	37.2
Volta	32.1
Upper East	46.5
Upper West	39.7
Western	33.0
National Regional Average	**33.4**

Source: DFID 1998

1.7 The Quality of Basic Education

There has not been a comprehensive attempt to evaluate the impact of the 1987 reforms on the basic school system. Some idea of whether it has made a positive impact on children's learning and achievement can be deduced from studies about the performance level of pupils. These are discussed below.

Test results, it can be argued, constitute the primary benchmark for evaluating educational quality, and therefore pupils' performances in specially designed tests could be used a yardstick for measuring the impact of reform.

As a consequence of the 1987 reforms, a test instrument was developed, with the support of USAID, to measure students' achievement in English and mathematics in the last year of primary school. The test is criterion-referenced (i.e. standards are fixed) with scores being reported as a percentage of students reaching a score of 60 per cent in English and 55 per cent in mathematics (Table 1.8). Data for 1996 show that only 5.5 per cent of pupils achieved the criterion pass score in English, and only 1.8 per cent in mathematics. In that year the tests were administered to a total of 16,641 pupils from 529 public and 36 private schools.

Table 1.8: Criterion-Referenced Test Results (Public Schools), 1992-1996

	1992	1993	1994	1995	1996
English*	2.0%	5.3%	3.3%	3.6%	5.5%
Mathematics**	1.1%	2.1%	1.5%	3.6%	1.8%

Source: DFID, 1998

Notes: *percentage achieving 60 per cent criterion pass score; **percentage achieving 55 per cent criterion pass score

The criterion-referenced mean scores shown in Table 1.9 suggest that there is some learning, but the scores, based on multiple response items mainly, are quite near to those that would be achieved from random guessing (i.e.20 per cent). The terminal JSS examination, the Basic Education Certificate Examination (BECE), gives little indication of student achievement, as it is norm-referenced with a consistently high pass rate - 84.8 per cent in 1994 (DFID, 1998:71).

Table 1.9: Criterion-Referenced Mean Test Scores (Public Schools), 1992-1996

	1992	1993	1994	1995	1996
English	29.9%	30.9%	31.0%	31.6%	33.0%
Mathematics	27.3%	27.4%	27.7%	28.1%	28.8%

Source: DFID, 1998

While the quality of the test items is variable, and the setting of a pass/mastery scores of 60/55 per cent is open to question, available data suggest that the vast majority of pupils in public primary schools are learning very little in terms of basic skills (DFID, 1998:70). The 1996 CRT results also showed pupils at private primary schools achieved significantly superior results in the tests, with a mean score of 61 per cent in English and 47 per cent in mathematics, compared with mean scores of 33 and 28.8 per cent, respectively in public schools. See Tables 1.10 and 1.11.

Table 1.10: Mean Scores in English (Public and Private Schools), 1992-1997

YEAR	PUBLIC	PRIVATE
1992	29.9	-
1993	30.9	-
1994	31.0	58.8
1995	31.6	-
1996	33.0	61.0
1997	33.9	67.4

Source: PREP/MOE, 1997

Table 1.11: Mean scores in Mathematics (Public and Private Schools), 1992-1997

YEAR	PUBLIC	PRIVATE
1992	27.3	-
1993	27.4	-
1994	27.7	47.3
1995	28.1	-
1996	28.8	47.0
1997	29.9	51.7

Source: PREP/MOE, 1997

Classroom based research conducted by CRIQPEG (the Centre for Research into Improving the Quality of Primary Education in Ghana), at the University of Cape Coast, indicates that a substantial proportion of children at all grade levels are unable to read and write to an appreciable standard. For example, even at grade 5, 40-50 per cent of children tested could not decode typical passages from the 2nd, 3rd, 4th and 5th English grade books. Only about 1/6 of grade 4 children and 1/3 of grade 5 children could decode a reading passage with at least 70 per cent accuracy (CRIQPEG Report, 1995).

Other than the CRTs, very little reliable data is available on the quality of schooling and learning achievement other than that outlined above. Both the 1995 Participatory Poverty Assessment (PPA) and the 1992 Ghana Living Standards Survey (GLSS) describe the poor quality of education as viewed by community members and service providers. Parents consistently said their children could not read or write (their assessment of whether the system was working) and that the JSS curriculum was too broad. A sharp rise in enrolments in private schools where exam results are better, and increases in repetition rates during the 1990s, further suggest learning outcomes in public schools has fallen (Norton et. al., 1995). This evidence indicates that the 1987 reforms have not produced the dividends expected. Again, such evidence of the poor performance of students in schools suggests that teaching and learning in schools is not having the desired impact in terms of improving the achievement levels of children.

A 1996 report by the Primary Education Programme (PREP) of the MOE attributed the poor performance of public schools primarily to low level teaching and learning. Other causes of the low performance were poor supervision of teachers, poor school management, frequent absenteeism of teachers in school, and the lack of instructional materials. The PREP report also concluded that private schools performed better due to certain advantages over public schools, such as greater control and supervision of

teachers, more effective school management and parent-teacher relationships, and proportionally more instructional materials (MOE, 1996).

The observations from the PREP study lead to certain conclusions and implications for teacher training that require further investigation. An overarching issue is the role of the teacher training process in contributing to the effectiveness of the school system. More specific issues include the design of instructional tasks for teacher training, what these tasks emphasise, and how they relate to the goal of raising children's achievement and performance at the basic school level.

The MOE, in trying to understand the reasons for low achievements among pupils in school, has suggested the following factors as among the key causes:

(i) Lack of learning materials, and for teachers' failure to make use of textbooks, equipment and other learning materials;
(ii) Low levels of pupils and teacher absenteeism;
(iii) Inadequate funding by Government on non-salary recurrent expenses;
(iv) Insufficient use of teacher –pupil instructional contact hours;
(v) Unmotivated teachers owing to unattractive incentives, ineffective sanctions and poor social appreciation of the roles of teachers;
(vi) An overly ambitious curriculum burdensome to both teachers and pupils;
(vii) Ineffective pre-service teacher training and inadequate in-service teacher training to introduce teachers to the new curriculum;
(viii) Non-interactive mode of teaching;
(ix) Weak supervision, both in school and by district/circuit supervisors and inspectors; and
(x) For the Junior Secondary School, a lack of workshops and equipment and qualified technical teachers.

(Ghana Ministry of Education briefing on fCUBE to the Cabinet, 1995).

This list shows four main areas to which the problems of weak learning results of pupils could be linked. These are:

- ineffective system of teacher training – (i), (vi), (viii);
- ineffective system of teacher and school supervision – (ii), (iv), (ix);
- inadequate funding and lack of support for teachers in terms of incentives – (iii), (v), (x) and;
- over ambitious school curriculum when viewed in terms of content coverage and time availability.

The evidence of low achievement of pupils in schools created an awareness of the need to target initial teacher training for more reforms. Recently, attempts have been made in teacher training to focus more attention on the development of specific teaching skills and professional qualities with the intention that this would ultimately lead to improvements in the teacher's instructional practices and pupils' learning outcomes.

1.8 Education Expenditure

Expenditure on education can be broken down into two components: recurrent expenditure and capital expenditure. Education's share of the national recurrent budget increased from 17 per cent in 1984 to an average of nearly 39 per cent between 1991 and 1995. In 1996, however, it was 34.7 per cent and increased to 35.4 in 1997. Although education's share of the recurrent budget fell to 30.4 per cent in 1999 it is expected to increase again to 38.8 per cent in 2000. (MOE, 1999; Avotri *et al.*, 1999:15; World Bank, 1996:4-5).

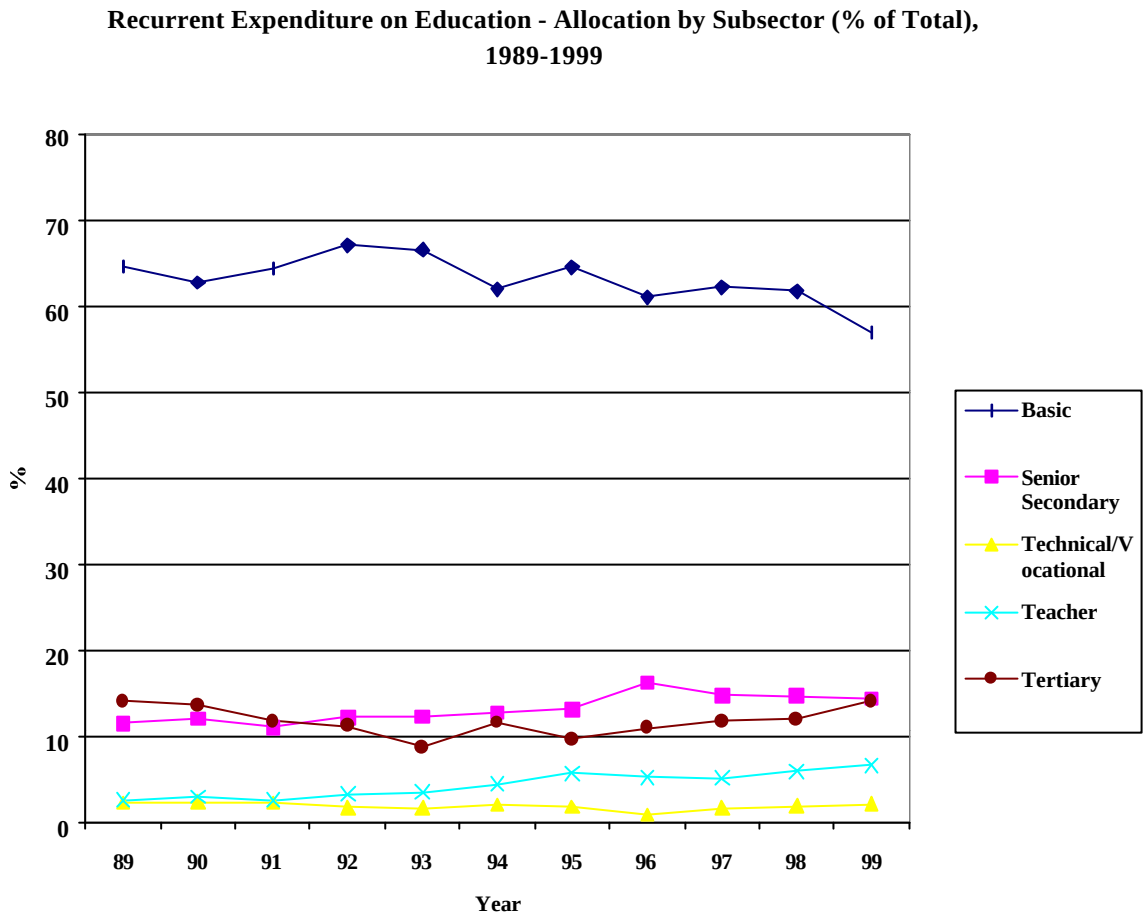
Figure 2 presents data on subsectoral allocation of the government's recurrent expenditure on education. Its allocation to basic education has risen from 44 per cent of the budget in 1984 to being consistently over 60 per cent since 1989.[6] In 1998 basic education received 61.7 per cent of the budget. In the latter half of the 1990s, however, basic education received a smaller proportion of the total education recurrent expenditure than the first half. This recent trend clearly runs counter to the policy to invest a greater proportion of recurrent expenditure at the basic level.

Recurrent expenditure on senior secondary schools was proportionately greater in the second half of the 1990s, but its share of the budget has been declining since peaking in 1996. In 1998, senior secondary education received 14.8 per cent of the budget. The recurrent allocation to tertiary education fell in the mid-1990s but has since increased to early 1990s levels, and was 12 per cent in 1998.

Teacher education has seen its share of the recurrent education budget grow more than any other subsector. Its allocation increased from 2.7 per cent in 1989 to 6 per cent by 1998 despite decreases in the years 1991, 1996, and 1997. In 1999 teacher education was provisionally to receive 6.7 per cent of recurrent education expenditure.

[6] As noted by Penrose (1998:50) all Ghanaian data combine primary with pre-school expenditures. This distortion of the figures can be quantified as pre-school expenditures account for about 18 per cent of the figure normally quoted as 'primary'.

Figure 2 [7]: Recurrent Expenditure on Education – Allocation by Subsector (% of Total), 1989-1999



By contrast, support to vocational and technical education declined in the mid-1990s but has since increased to earlier levels of around 2 per cent. During the 1990s non-formal education received about 0.5 of the recurrent expenditure to education, and in 1998 its share was 0.4 per cent.

The recurrent cost per student by educational level over the period 1992 to 1998, adjusted for inflation using constant 1996 US$ prices, is shown in Table 1.12. The relative differences in the unit costs by level of education have changed significantly during the 1990s. They provide an indication of the tradeoffs involved in investing at different educational levels.

[7] Data for 1999 are provisional estimates.

Table 1.12: Recurrent Public Expenditure Per Student (constant 1996 US$ - 1996, US$1=c1637)

Level/Type of Education	1992	1995	1998
primary	36.8	44.3	41.8
JSS	66.8	86.6	68.0
SSS	77.4	153.9	168.0
vocational/technical	188.4	139.0	299.5
teacher education	246.6	442.6	617.3
polytechnic	102.2	131.8	209.6
university	1376.9	1123.9	859.9

Source: Adapted from data in MOE, 1999: Appendix 4.1; World Bank 1998: 16

Unit costs (adjusted for inflation) at the primary level have remained relatively constant but, of concern, declined in the period 1995 to 1998 despite the objectives of fCUBE. Unit costs for JSS increased in 1995, but by 1998 had returned to their 1992 level. Expenditure per student at the SSS level, however, has increased significantly since 1992. The unit costs of technical and vocational education have increased since falling in the mid- 1990s. By level of education, the most dramatic change in the unit costs has been the increase in cost per student in teacher education. In real terms, the annual unit cost of teacher education increased by 79.5 per cent between 1992 and 1995, and then by 39.5 per cent between 1995 and 1998. The unit cost of polytechnic students more than doubled between 1992 and 1998, but in 1998 was only about one-third of the unit cost of teacher education and a quarter of the unit cost of university. Over the same period, the university student unit declined by 37 .5 per cent. Thus, the disparity in unit costs between these forms of tertiary education has been closing.

Education sector capital expenditure represents a small share of total public investment. Over the period 1987-1995, however, it increased about fivefold in real terms. This represented a change from 0.7 to 1.4 per cent of government capital expenditure. In 1996, however, education capital expenditure had fallen to 1 per cent of total government capital outlay (World Bank 1999:8). Most investment expenditure is financed from external funds in the form of development assistance from donor agencies. Until the introduction of new budgeting procedures in 1999 under the Medium Term Expenditure Framework (MTEF) donor assistance was not included in sector budgets. Table 1.13 shows the sources and distribution of fCUBE capital funding, including donor assistance, during the period 1996-1998.

Table 1.13: Source of fCUBE funding 1996-1998

source of funding	GOG	IDA (PSDP)	IDA (BESIP)	USAID	DFID	UNICEF /CIDA	KfW/ GTZ	JICA
% contributed	19%	40%	11%	5%	7%	4%	12%	3%

Source MOE, 1998, in Avotri *et al.* 1999:31

Under fCUBE, donor support has tended to go towards the capital costs of specific projects. Some of the larger projects include the Primary School Development

Programme (PSDP) funded by IDA, support to BESIP again through IDA, and the rehabilitation of the teacher training colleges by KfW.

The government's policy of increased community participation in education has empowered districts to assume grater responsibility for education. They receive payments from the District Assembly Common Fund (DACF) which represents 5 per cent of national tax revenue from central government, for the development of the district. Education is partly financed from the DACF. In addition, districts generate income, mostly through education levies and fund raising activities. At the school level, the Parent Teacher Associations (PTAs) also embark on various development projects to support basic education. District assemblies are responsible for the building and maintenance of physical facilities (classrooms, furniture, etc.) for basic schools. Again, until the introduction of the new budget procedure in 1999 district level expenditure on basic education was not accounted for by the MOE budget figures. At the time of writing no data were available on the aggregate proportion of total basic education expenditure raised by the DACFs or PTAs.

1.9 Teachers

The promotion of quality teaching and learning has important implications for restructuring the current system of initial teacher education in Ghana. Improved quality in teaching and learning, with subsequent increased levels of achievement at the basic school level, calls for a certain kind of teacher who is capable of delivering effectively revised school curricula and promoting efficient learning in schools. The MOE identified inadequate numbers of trained and qualified teachers, and ineffective initial teacher training provided by the TTCs, as key factors contributing to the poor level of pupil achievement.[8] According to the MOE (1993:23),

> [The TTCs] are inefficient in producing effective teachers since the trainees and the tutors have so little exposure to actual schools and classrooms, and academic content is taught and tested above practical teaching methodology. The college curriculum also does not differentiate sufficiently between primary and JSS methodology.

Some of the practices in training colleges that are believed to have contributed to the poor performance of trained teachers in schools with an attendant effect on the academic performances of pupils are summarised as follows:

- Emphasis on academic content in the training programme above training in practical teaching.
- Lack of exposure to actual schools and work in the classrooms.
- Inadequate of actual training in classroom methodology.
- Lack of content and opportunity for the education and training of teachers to prepare them for handling the new directions and management issues which are some of the outcomes of the education reform programme, e.g. teaching large classes and multi-grade teaching.

[8] The MOE (1994:16-17) argues that although private schools in Accra and Kumasi have both higher pupil-ratios (averaging over 40:1), and only 25 per cent trained teachers, pupils in these private schools perform better than their counterparts in the public schools. This argument, however, appears based on raw test results, unadjusted for the socio-economic background of pupils and other school factors.

Another dimension of the problem of quality of teaching and learning is the proportion of untrained teachers (defined as those teachers who have not completed a pre-service training course at a Teacher Training College) in basic schools. In 1996 the number of teachers at the public primary level was 62,634 and 38,016 in public junior secondary schools (MOE, 1999:6).

Table 1.14: Total and percentage of trained and untrained teachers at primary level (public schools), 1986-94

year	total	trained		untrained		pupil-teacher ratio	pupil-trained teacher ratio
		total	%	total	%		
1986/87	64,359	35,912	55.8	28,447	44.2	22.8	40.9
1987/88	63,367	36,689	57.9	26,678	42.1	23.3	40.2
1988/89	62,670	37,790	60.3	24,880	39.7	25.5	42.3
1989/90	62,859	41,738	66.4	21,121	33.6	27.1	40.8
1990/91	62,823	41,526	66.1	21,297	33.9	28.7	43.4
1991/92	64,035	46,169	72.1	17,866	27.9	28.1	39.0
1993/94	62,614	47,796	76.3	14,845	23.6	-	-
1995/96	60,607	52,690	86.9	7,917	13.1	-	-

Source: MOE 1994; MOE 1995; TED 1997

Notes: 1) Trained teachers are defined as those teachers who received initial training from a TTC.
2) The total number of untrained teachers includes National Service Personnel working as teachers.
3) In 1991, of the 62,823 teachers in service, 8.8 per cent (5,530) were 'detached', i.e. not teaching because they were in administrative posts or on study leave. In 1992, however, a Government policy was introduced to move trained teachers working in administrative posts back into the classroom (Konadu, 1994:39)

Table 1.15: Total and percentage of trained and untrained teachers at JSS level (public schools), 1986-96

year	total	trained		untrained		pupil-teacher ratio	pupil-trained teacher ratio
		total	%	total	%		
1986/87	33,443	21,805	65.2	11,638	34.8	18.6	28.5
1987/88	40,528	27,275	67.3	13,253	22.7	15.1	22.4
1988/89	34,584	24,831	71.8	9,753	28.2	17.6	24.5
1989/90	35,262	22,885	64.9	12,377	35.1	17.7	27.3
1990/91	30,708	23,307	75.9	7,401	24.1	18.5	24.4
1991/92	33,351	23,979	71.9	9,372	28.1	17.7	24.6
1992/93	25,386	23,558	92.8	1,828	7.2	-	-
1995/96	29,669	25,782	86.9	3,887	13.1	-	-

Source: MOE 1994; TED 1997

Note: At the time of writing no reference could be found which details the sharp increase of 1992/93 in the number of trained JSS teachers as a percentage of all JSS teachers. It is apparent from the absolute totals, however, that this was due to the sharp drop in the number of untrained JSS teachers in the system rather than a substantial influx of trained JSS teachers.

Total numbers of trained and untrained teachers at the primary and JSS levels are presented in Tables 1.14 and 1.15. In 1989, 66 per cent of primary school teachers were trained, while for the JSS level, the figure was 65 per cent. By 1995, these figures had risen to 87 and 90 per cent, respectively. In line with the objectives of the 1987 education reforms, the total number of untrained teachers at the basic level has steadily decreased, but the latest figures for 1995 suggest that the proportion of untrained teachers remains significant at 13 per cent.

Table 1.14 shows that while the pupil-teacher ratio at the primary level steadily increased from 23:1 in 1986/87 to 28:1 in 1991/92, the pupil-trained teacher ratio has remained fairly constant, fluctuating around 40:1. Thus by 1991/92, although a primary teacher was more likely to be trained, on average he or she taught larger classes. Data presented in Table 1.15 indicates that at the JSS level the pupil-teacher ratio fell from 18.6 in 1986/87 to 17.7 by 1991/92, and the pupil-trained teacher ratio fell from 28.5 to 24.6. By 1991/92, JSS teachers were more likely to be trained and teach fewer pupils. Recent data from MOE estimates pupil-teacher ratios at the primary and JSS levels as 32.4 and 18.3, respectively for 1996 (MOE, 1999:6).

Konadu (1994:36) notes that in 1990/91, the Ghana Education Service (GES) deployed 4,727 newly qualified teachers (NQTs) to posts in primary and JSS schools. In 1991/92, 9183 NQTs were deployed. Using these figures together with data presented in Tables 1.14 and 1.15, the rate of attrition among trained teachers for the academic years 1990/91 and 1991/92 is calculated as 7.0 per cent and 6 per cent,

respectively.[9] Reports suggest the rate of annual trained teacher attrition is high due to inadequate remuneration, lack of promotional prospects, and low social status of teaching (Bame, 1991; World Bank, 1996:5). No recent data is available on the annual rate of teacher attrition. Research needs to be carried out to find out how long newly trained teachers stay in the profession and why those who choose to leave do so (e.g. relatively low status and/or remuneration, retirement, HIV/AIDS). These are issues requiring further exploration through policy research to inform teacher-posting policy and thereby ensure that projections of teacher requirements can be realistically met.

Table 1.16 presents data showing the numbers of trained and untrained teachers in primary schools across the ten regions of Ghana in 1993. The more remote and disadvantaged regions of Western, Brong-Ahafo and Northern, have the highest proportion of untrained to trained teachers at the primary level.[10] It is clear that significant regional disparities exist. These are partly due to absolute resource limitations but can be attributed largely to the process of resource distribution which favours the more economically advantaged areas of the country (World Bank, 1996:8). The problem is exacerbated by the significant proportion of trained teachers that refuse postings to the more economically deprived areas of the country. Officials in the Teacher Education Directorate (TED) of the MOE point out that there is evidence that some urban districts have more trained teachers than they require, and yet in each year some of these urban districts declare shortages in teachers.

[9] Data on NQT deployment disaggregated by level of schooling, i.e. primary and JSS, were not available at the time of writing.
[10] Data on the proportion of trained to untrained JSS teachers by region were not available.

Table 1.16: Distribution of trained and untrained teachers at primary level (public schools) by region, 1993/94

region	trained		untrained		total
	number	%	number	%	
Ashanti	8,543	81.1	1,993	18.9	10,536
Brong Ahafo	4,750	62.2	2,885	37.8	7,635
Central	4,456	74.1	1,557	25.9	6,013
Eastern	8,377	79.5	2,164	20.5	10,541
Gt. Accra	4,541	95.8	199	4.2	4,740
Northern	3,366	66.1	1,724	33.9	5,090
Upper East	1,622	86.8	247	13.2	1,869
Upper West	1,552	97.8	35	2.2	1,587
Volta	6,376	86.5	991	13.5	7,367
Western	4,186	57.8	3,050	42.2	7,236
Total	**47,769**	**76.3**	**14,845**	**23.7**	**62,614**

Source: adapted from MOE 1995:14

Table 1.17 shows that there are districts in the country where up to 75 per cent of teachers remain untrained.

Table 1.17: Trained Teachers Characteristics by Neediest Districts

District	% of Total
Juabesobia	25.38
Tolon-Gunbugu	28.33
Afram Plains	32.26
Sene	38.89
Savelugunan	39.50
Twifu-Heman	42.30
East Gonja	43.63
Mpohor Wassa	45.27
Wassa-Amenfi	46.34
Asunafo	46.61
Atebubu	46.69
Sefwi-Wiaso	48.53
Zabuzugutatale	49.21
Adansi East	49.25
Amansie West	49.78

Source: Extracted from World Bank Report, 1996

It is interesting to note that private schools often have the least number of trained teachers and yet from the PREP CRT results such schools out-perform their counterparts in the public schools. Available statistics from the PBME Division of the Ministry of Education show that in 1993, for example, the percentage of trained teachers in the public primary schools was 73.3 per cent, while in the private primary schools the percentage of trained teachers was only 28.6 per cent. This obviously

raises questions about the policy of increasing trained teachers in schools with the aim to promote greater achievements in pupil learning outcomes. School information data collected as part of the MOE/PREP criterion-referenced tests administration shows that the private schools have a clear advantage over the public schools in the following respects:

- Greater control and supervision of teachers
- Effective School Management Board
- Interest of parents in what their children learn
- Open days which bring teachers, parents and children together
- Availability of proportionately more instructional materials
  (MOE/PREP 1996:28)

Thus, it would appear that effective school management systems, community participation in school development and increased instructional materials in schools are crucial for schools to enhance pupil learning outcomes, and that merely increasing the percentage of trained teachers without such supportive structures will not yield the desired results.

Nevertheless, the general lack of correspondence between trained teacher availability in schools and pupil performance as revealed by the CRT results raises questions about the quality of teachers and their ability to effect improvements in pupil learning. If in real terms the contribution from their training is minimal then it is necessary to re-examine the training curriculum of TTCs to make it perhaps more responsive to the current problems of pupil learning achievement, lack of instructional materials and ineffective school management systems. Besides, it will inform the policy of replacing 'untrained' teachers with trained ones and whether time and money should be spent on training the 'untrained' or providing the necessary management support system for all categories of teachers in schools to deliver quality learning. Ultimately, this would have important implications for the policy of teacher demand and supply.

1.10 Conclusion

This chapter has provided an overview of basic education in Ghana. It describes the structure of the basic education cycle, trends in enrolment and participation, patterns of expenditure across educational levels, and key policy reforms. Teacher education in Ghana has received far less attention than education at the school level despite inadequate numbers of trained teachers, and the poor quality of teaching and learning outcomes. It is imperative that initial teacher education for basic education is analysed more closely than it has been to date, and given a higher priority in the implementation of educational reforms. The background information presented in this chapter informs the critical analysis of teacher education in subsequent chapters.

CHAPTER TWO

TEACHER EDUCATION IN GHANA

2.1 Introduction

This chapter examines the development of teacher education in Ghana. It describes the range of teacher education programmes and qualifications, focusing on the three-year post-secondary course run by Ghana's 38 teacher training colleges (TTCs). The course is outlined in terms of curriculum, assessment procedures, and instructional practices.

2.2 Historical Overview of the Development of Teacher Education

Ghana's first teacher training college opened in 1848 at Akropong-Akwapim by the Basel Mission. This started a tradition of teacher education founded by missions training teachers for their schools. Following independence in 1957 and a strong government commitment to developing human resources, more teacher training colleges were opened to cater for the increase in demand for teachers created by the expansion in school enrolment rates. The history of the development of teacher education in Ghana is a chequered one, often based on *ad-hoc* programs to meet emergency situations and needs of the education system. As the needs of basic education have changed over time, this required more institutional training to upgrade the level of teaching. Consequently, Ghana has built up a teaching corps comprising different categories of teachers. These are summarised below (and in Table 2.1, page 23):

Certificate 'A'
The four-year teacher training course was established in 1930 for the training of good quality middle school leavers to teach in the primary and middle schools. As teaching was then a profession that was highly respected, it attracted those middle school leavers with the best qualifications.

Certificate 'B'
In order to meet the increasing demand for more teachers at the primary level due to the rapid expansion of the education system, a two-year Certificate 'B', post-middle school teacher training progamme was introduced in 1937.

Post-B Certificate 'A'
As a result of further expansion of the education system, at the time of the Accelerated Development Plan in 1951, a new two-year programme was introduced for Certificate 'B' holders which enabled them to upgrade to a Post-'B' Certificate 'A' after a period of teaching experience in the classroom.

Certificate 'A' (Post-Secondary)
With the expansion of secondary education, in 1950 a new two-year programme was established for secondary school leavers to train them to teach in middle and secondary schools. These graduates were awarded the Certificate 'A'.

Two-year Specialist/Three-year Diploma
These were teachers trained in specialised subject areas. The two-year programme covered specialisation in home science, physical education, music, and art. It was later up-graded to a three-year diploma course to embrace more subject areas such as English and mathematics. This programme was introduced in 1962, and was open to all Certificate 'A' teachers who had classroom experience.

All the programmes described above have been phased out and in their place is now the three-year Post-Secondary Teacher Training Programme leading to Certificate 'A' qualification. This programme was introduced in 1978 with the main purpose of improving the professional competence of trained teachers. Presently, there are 38 teacher-training colleges offering courses leading to the award of this certificate. Of the 38 colleges, seven train female teachers only, one is an all male technical TTC, and the remaining 30 are mixed. With the exception of the TTC in Accra, all others are residential. All 38 colleges prepare teachers for both primary and JSS levels. No distinction is made in the training offered by the colleges in terms of the level of school pupils to be taught, but plans to introduce college specialisation by educational level are under discussion currently.

In 1993, the Education Commission on Teacher Education recommended the setting up of only two levels of teacher education. These were:

- 4-year straight degree programme for graduates from senior secondary schools; and
- 2-year post-diploma degree programmes for practising teachers.

This recommendation has yet to be implemented.

Graduate Teachers
There are two types of full-time graduate teachers in Ghana. One group, with professional training, is classified as 'professional graduate teachers'. The other group, without professional training, is referred to as 'non-professional graduate teachers'. Graduate teachers are usually posted after their training to secondary schools and TTCs. Not all the training college tutors and secondary school teachers are degree holders, however. Some hold diplomas only.

Table 2.1: Teacher Education Programmes and Qualifications

Level	Duration of Course	Entry Level	Certificate Awarded	Level of teaching after certification
Post-secondary level	3 Years	Completion of Secondary School	Post-secondary Certificate 'A'	Primary and junior secondary
Higher education (non-graduate level)	3 Years	Completion of Post-Secondary and having taught for 3 years	Diploma Certificate	Either post-secondary teacher training or senior secondary
Higher education (undergraduate level)	3 years or 2 years for post-diploma BEd	Teachers holding diploma certificate, or senior secondary leaving certificate*	BEd Degree	Either post secondary teacher training or, senior secondary school
Higher education (postgraduate level)	1 Year	Holders of graduate degrees e.g. BSc, BA	Post-Graduate Certificate in Education	Senior secondary schools or post-secondary teacher training colleges

* The entry qualification is higher than for the post-secondary level.

Table 2.1 shows the current system of teacher education in Ghana. Since this study is concerned with basic education, the discussion focuses on the three-year post-secondary programme leading to Certificate 'A' qualification.

2.3 Teacher Training College Curriculum

2.3.1 Structure and Process of Curriculum Development

The Professional Board of the Institute of Education at the University of Cape Coast develops curriculum guidelines for initial teacher training for basic education. These guidelines have to be approved by the Teacher Education Division (TED) of the Ghana Education Service (GES) and the Ministry of Education. The preparation of syllabi for the TTCs takes place in subject panels formed by the Teacher Education Directorate with representation from the Curriculum Research and Development Division (CRDD) of the GES. The syllabi are then sent to the Professional Board of the Institute of Education for comment and ultimate approval.

2.3.2. TTC Course Structure[11]

The three-year TTC Certificate 'A' course for basic education is structured as follows: general education (30 per cent); academic education (30 per cent); and, professional studies (40 per cent). General education is comprised of eight 'core' subjects taught in all 38 TTCs. These are:

- basic mathematics
- English language
- basic science
- Ghanaian language

[11] At the time of writing the weighting of the courses was being changed. The first year of training was for academic education only whilst the remaining two years was devoted to curriculum studies and methodology. This new system has just been introduced for the 1998/99 first year cohort; the second and third year trainees are still following the old curriculum structure.

- physical education
- cultural studies
- education
- agricultural studies

Under the 'academic education' component of the programme, each student takes two elective subjects chosen from science-based subjects (group one) or vocational subjects (group two). Subject availability varies from college to college with some specialising in group one subjects, and others in group two subjects. The groups and corresponding subjects are shown below.

Group One
- mathematics
- agricultural science
- science
- technical skills
- physical education

Group Two
- English literature
- social studies
- vocational skills
- French
- life skills

Three of the 38 colleges offer group one elective subjects only; twenty-one offer group two elective subjects only; and 14 offer both group one and two electives.

Time allocation is in terms of the number of periods per week with each period consisting of a 40-minute lesson. Officially, all colleges provide 33 weeks of instruction per year. Colleges, however, have the flexibility to organise their own schedule, but are required to inform the Teacher Education Directorate. Time allocation per subject (both core and elective), per week across each year of study, is shown in Tables 2.2 and 2.3 below. For example, a teacher trainee taking mathematics as a elective subject has six periods of mathematics a week in years one and two, and ten periods a week in year three.

Table 2.2: Teacher Training College - Core Subject Time Allocation (per week)

Core Subject	Year 1	Year 2	Year 3
mathematics	4	4	0
science	4	4	0
agricultural science	3	3	0
English language	5	5	5
education	6	6	6
cultural studies	3	3	0
physical education	2	2	0
Ghanaian language	3	3	0
Total	**30**	**30**	**11**

Table 2.3: Teacher Training College - Elective Subject Time Allocation (per week)

Elective Subjects	Students select two subjects from either Groups 1 or 2			
	Year 1	**Year 2**	**Year 3**	
mathematics	2	2	10	
agricultural science	3	3	10	
science	2	2	10	**GROUP 1**
technical skills	7	7	8	
physical education	6	6	10	
English literature	5	5	12	
social studies	5	5	12	
vocational skills	5	5	12	**GROUP 2**
life skills	5	5	12	
French	7	7	12	

During the second and third years, each subject area is divided into two parts: subject knowledge content and subject methodology. The education course is focused on issues related to the theory and practice of education, and does not relate to any specific subject area.

Teaching practice is officially expected to last eight weeks although the actual time spent appears to be much less, typically five to six weeks. This is largely due to the poor organisation of teaching practice in the schools (Akyeampong, 1997).

An analysis of three TTCs by Akyeampong (1997) revealed during the three year course only about one-third of the time is spent on activities directly related to classroom instruction and assessment (see Table 2.4). Moreover, this excludes time lost due to tutor absenteeism, tutor lateness, and other regular college disruptions. Consequently, the quality of instruction and assessment suffer.

Table 2.4: The Breakdown of Official Term Time in Three Colleges

Term	Official Term Time (weeks)	Approximate Contact Time for Teaching and Learning (weeks)	Examination Time (weeks)	Other Activities/Events (weeks)
1	12	Year 1: 10 Years 2&3: 6	Year 1: 0 Year 2: 0	Year 1: 0 Year 2&3: Teaching Practice (TP): 4 Orientation/Settling: 1 Sporting Events: 1
2	11	Year 1: 7 Year 2&3: 3	Year 1: 2 Year 2&3: 2	Year 1: 0 Years 2&3: TP: 4 Examination preparation: 1 Sporting Events: 1
3	10	Year 1: 7 Year 2&3: 4	Year 1: 2 Year 2&3: 5	Year 1: Exam Preparation: 1 Years 2&3: 0
Total	**33**	Year 1: 24 Year 2&3: 13	Year 1: 4 Year 2&3: 13	Year 1: 5 Years2&3: 13

Source: Akyeampong, 1997

2.4 Assessment Procedures

The Institute of Education at the University of Cape Coast has sole responsibility for conducting examinations and certifying post-secondary teacher trainees. The Institute engages examiners to set questions and moderators to check them, and administers the examinations. Selected tutors from the training colleges mark the examination scripts at a central residential marking centre. An Award Committee of the Institute of Education, comprising chief examiners, representatives of college principals, the Director of Teacher Education, and Ghanaian National Association of Teachers (GNAT) officials reviews the results and makes recommendations to the Professional Board of the Institute of Education for approval. The examination constitutes 70 per cent of the overall marks awarded to teacher trainees, with the remaining 30 per cent from internal continuous assessment.

Each subject examination consists of two papers. Paper one focuses on subject knowledge and is subdivided into two sections. The first section is made up of short-structured questions, and multiple choice questions for some subjects. The second section of paper one also focuses on subject knowledge but requires more elaborate written responses. Paper two covers the subject application (or methodology). The sections are structured in a similar manner to paper one. Teaching practice (practicum) and 'long essays', in which students have to write on an approved topic related to teaching and learning, constitute separate examinable subjects. Students have to pass the teaching practice before their remaining subjects can be considered for assessment.

Candidates are required to obtain at least an average pass mark of 40 per cent in both papers before they are awarded a pass in the subject as a whole. Teaching practice is supervised by college tutors using a one to five grading scale that is related to specified competencies, skills and attitudes in teaching. There is some dissatisfaction with this mode of assessment because it is perceived as too subjective and unrelated to clearly articulated criteria.
It appears that very few students fail teaching practice and the long essay examination. Students who fail in more than two subjects, apart from the long essay and teaching practice, are deemed to have failed the entire examination. Only a few students fall into this category. Students who fail one or two subjects, apart from the long essay and teaching practice are made to resit and pass them before they are certified. All such students, however, are permitted to takeup teaching posts while preparing to re-sit the examination. Thus, all student trainees are guaranteed a teaching post after training irrespective of whether they pass the final examinations. Those who fail, however, receive the 'untrained' or pupil teacher salary that is less than that for the trained teacher, until they pass the resits.

Continuous assessment is conducted in each college and comprises 30 per cent of the total marks for each subject. Marks for continuous assessment are submitted to the Institute of Education and combined with marks from the external examinations to arrive at a final score. It is difficult to ascertain a correlation between continuous assessment and external examination marks in the absence of rigorous analysis. Theoretically, it can be argued that since tutors' continuous assessment takes into

account a much wider range of skills and knowledge, compared with that of external examinations, a moderate correlation can be expected. In practice, however, it appears that continuous assessment marks submitted by the training colleges tend to have a high mean and low standard deviation. In the absence of any system of moderation of continuous assessment marks, this is not unexpected.

The current method of assessing teacher trainees based on summative end-of-year assessment through final examinations moderated by an external agency only test students' ability to demonstrate acceptable cognitive objectives. In other words, the current system of assessment for post-secondary teacher education may be lacking in construct-related validity due to the highly cognitive-based nature of the content of assessment.

The introduction of continuous assessment into the teacher training system in 1989 was seen as an attempt to ensure that the assessment of teacher trainees is not entirely focused on examinations. Continuous assessment was intended to provide an opportunity for college tutors to improve the link between training and assessment. There were no clear guidelines, however, as to the nature of the content of the continuous assessment. College tutors themselves were left to determine what tasks would be continually assessed.

A study by Akyeampong (1997) showed that the introduction of continuous assessment into the TTCs has not yielded the desired effect and results. The study revealed that:

1. Tutors' continuous assessment practices gravitated towards external examination requirements and continuous assessment was perceived and implemented as supplementary rather than complementary to examinations. The study revealed that a major constraint to change is the political focus on summative assessment conditioned by the examination culture.

2. Many tutors and teacher trainees recognised the importance of continuous assessment for promoting professional learning and instruction. This was not, however, put into practice. Instead, it reflected commonly accepted theoretical knowledge about the function of continuous assessment. This problem seems to stem from poor conceptualisation of continuous assessment for teacher training.

3. Generally tutors made very little use of continuous assessment results for formative and professional development purposes. The main reason for this was due to the lack of will on the part of tutors to use continuous assessment in this way because of the increased workload this generated. Also, for some there was a lack of understanding of how the continuous assessment process and results could be used to promote teaching and learning outcomes.

4. Time available for assessing students on a more regular and systematic basis was limited. This problem had arisen because of the short college year resulting from extracurricular and examination activities that took up a considerable amount of term time. Tutors preferred to use the scarce time to teach in order to complete the syllabus before external examinations.

5. Institutional support for continuous assessment in terms of professional guidance for tutors was non-existent. Again, this seems to be because of the lack of proper orientation and inadequate training in the management of continuous assessment at the institutional level.

6. There was a lack of system for monitoring and moderating continuous assessment leading to uniformity of practice across colleges. The lack of a system for moderating continuous work, at either the internal or external level, also cast doubt on the reliability and validity of assessment results that contributed to teacher certification.

2.5 Instructional Practices in the Teacher Training Colleges

The 1987 educational reforms did not specifically target the teacher training institutions for reform. There were certain implications of the reform for teacher training, however, due to the expected changes in the curricula of the basic education level. For example, the objectives of the revised school curricula as a result of the reforms placed a lot of emphasis on hands-on activities and student-centred interactional approaches to teaching. Thus, in response to the changes that were taking place at the basic education level, the ODA[12]/British Council in collaboration with the Teacher Education Division of the Ministry of Education launched the Junior Secondary School Teacher Education Project (JuSSTEP). JuSSTEP was a four-year project (1989-1993) which targeted the 38 teacher training colleges in five subject areas (Mathematics, English, Science, Technical Skills and Education) for reform.

The central thrust of JuSSTEP was to up-grade the professional competence of tutors and to disseminate ideas on appropriate teaching methodology through INSET workshops and tutor-supported instructional materials. The strategy to achieve this main objective was to introduce student-centred, interactive models of teaching in the five subject areas in all the 38 teacher-training colleges.

In 1993 the Teacher Education Division and the ODA carried out a study to assess the impact of the JuSSTEP reforms. In the executive summary of the report that was produced from the study of the JuSSTEP reforms, the conclusion drawn was that:

> Tutors (were) positive about the new methodologies and in certain areas (such as) Mathematics, Science and Technical Skills (were) applying a more student-centred approach. However, the study reveals that the impact of JuSSTEP is limited by certain major structural constraints; the main ones being an overloaded curriculum, excessive student-tutor ratios exacerbated by insufficient tutors per subject, over-enrolment, high staff turnover, and lack of classroom facilities. These factors, combined with pressure to cover the syllabus and prepare for examinations, present an excessive workload in terms of teaching and assessment requirements and act as major impediments in the effective

[12] In 1997 the new British government changed the name of the Overseas Development Administration (ODA) to the Department for International Development (DFID), and expanded its remit.

> implementation and adoption of new methodologies in teacher education in the training colleges (GES/TED/ODA, 1993)

It is clear from this concluding statement that problems still persisted even after the reforms in basic teacher training. It would appear that not enough attention was given to certain critical aspects of the teacher training system, in order to make them more responsive to the kind of changes that were being introduced. For example, although innovative instructional/learning and assessment strategies were introduced at the classroom level, the teacher training programmes were still narrowly focused on timed written examinations, and this had the effect of reducing attention to performance-related skill development that had implications for improving classroom teaching practice. Thus, a key limiting factor of the impact of the JuSSTEP teacher training reforms was the effect an examination-oriented culture was having on teaching and learning decisions. There was also the lack of appropriate supportive management structures in the colleges to promote and support the changes to the development of teaching and learning skills of teacher trainees.

Thus the JuSSTEP reforms, which were intended to improve the competence of trained teachers in order to improve the quality of teaching and learning in basic schools, did not appear to have made the intended impact, due to poor reconceptualisation of the innovation, entrenched examinations-culture and inadequate management support structures.

One of the most serious problems with basic teacher training is the quality of instruction. A study by ODA/GES (1993:1) indicated that in the training colleges, "approaches to teaching and learning have been largely teacher-centred, emphasising lectures, dictation and recall of notes".

This method of teaching has become an entrenched culture and change-resistant because new approaches are perceived as more time-consuming. Moreover, it favours the examination culture that requires regurgitation of textbook knowledge without sufficient demand on thinking and application skills.

> Learning [in training colleges] was heavily examination-oriented. Students were largely the passive recipient of 'content' and 'theory' while methodology and practical teaching strategies were largely ignored. (ODA/GES, 1993:1)

In his 1997 study, Akyeampong finds access to, and use of, learning aids and materials in the TTCs to be often non-existent. The use of student-centred, interactional approaches was introduced in science, mathematics, English, technical skills and education. Their impact, however, has been minimal. Many teacher tutors are still not applying the activity-based teaching methodology advocated for the teacher education programmes. This seems to be because the tutors often see these methods as more demanding than the 'chalk and talk' approach with which they are more familiar. Since students pass their examinations via the 'chalk and talk' approach they see little reason to change their teaching methods. This is a typical case of examination requirements promoting the use of a certain kind of instructional approach.

2.6 Conclusion

This chapter has examined the development of teacher education in Ghana. It describes the three-year post-secondary course run by Ghana's 38 teacher training colleges (TTCs), focusing on the curriculum, assessment procedures, and instructional practices. Although not explicitly targeted by the education reforms of 1987, attempts have been made to bring about change in initial teacher education to improve the quality of teaching and learning in schools. Most notably, these have included the introduction of student-centred, interactional approaches to teaching and learning in the colleges. This shift, however, has been constrained by the examination-oriented culture of the colleges and lack of appropriate supportive management structures.

CHAPTER THREE

TEACHER TRAINING COLLEGES FOR BASIC EDUCATION

3.1 Introduction

This chapter draws together data on the efficiency of the TTCs. A review of documentation available revealed a marked lack of information on aspects of college efficiency. What information has been found, however, is organised here under the headings of TTC enrolment, selection procedure, tutor qualification, and the financing of teacher education. Where data useful to the MUSTER project were unavailable these are highlighted as a potential sub-study investigations.

3.2 Overview of the Teacher Training Colleges

At present there is only one mode of initial teacher training for basic education in Ghana: the three-year post-secondary teacher training programme. This programme was introduced in 1978 and is offered by the 38 TTCs. Of the 38 colleges, seven train female teachers only, one is an all-male technical teacher training college, and the remaining 30 are co-educational. With the exception of the TTC in Accra, all others are residential. All 38 colleges prepare teachers for both primary and JSS levels, but at the time of writing plans to introduce college specialisation are being discussed by the TED.

3.3 Enrolments in the Teacher Training Colleges

The Director of Finance and Administration (MOE) in consultation with the TED decides the number of new trainees admitted each year. The number of new trainees is based on a quota given by the MOE. This changes each year and does not appear to be linked to analysis of teacher demand. TTC enrolments in total, and by sex, for the academic years 1992/93 to 1997/98, are shown in Table 3.1. Since 1993, the number of trainees enrolled has increased by 51 per cent. In general, the population of training college students has been increasing over the years except for a slight fall in 1993/94. Female enrolment as a percentage of total enrolment has also increased from 33 to 38 percent between 1995 and 1998.

Table 3.1: Total Enrolment in Teacher Training Colleges, 1992-1997

year	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
male	-	-	-	12,316	12,935	12,576
female	-	-	-	6,110	6,722	7,823
total	13,561	13,457	16,447	18,426	19,657	20,399

Source: Teacher Education Division/GES Statistics 1998

Table 3.2 shows enrolment at all 38 TTCs for the academic year 1996/97. The colleges are dispersed among all ten of Ghana's administrative regions and vary in size in terms of trainee enrolment. In 1996, the smallest was Mampong Technical TTC with 241 trainees; the largest Foso with 914. Average enrolment in 1996/97 was 510.

Table 3.2: Teacher Training Enrolment by College, 1996/97[13]

	TTC	Region	Male	Female	Total
1.	Abetefi	Eastern	274	83	357
2.	Accra	Gt. Accra	317	124	441
3.	Ada	Gt. Accra	306	106	412
4.	Agogo	Ashanti	0	327	327
5.	Akatsi	Volta	456	117	573
6.	Akrokerri	Ashanti	451	169	620
7.	Atebubu	B. Ahafo	341	71	412
8.	Bagabaga	Northern	488	43	531
9.	Bekekum	B. Ahafo	368	81	449
10.	Dambai	Volta	382	70	452
11.	Enchi	B. Ahafo	296	58	354
12.	EP, Amedzofe	Volta	352	86	438
13.	EP, Bimbilla	Northern	483	101	584
14.	Foso	Central	696	218	914
15.	Gbewaa	Upper East	396	55	451
16.	Holy Child	Western	0	377	377
17.	Jasikan	Volta	429	99	528
18.	Kibi	Eastern	375	193	568
19.	Komenda	Central	440	152	592
20.	Mampong	Ashanti	241	0	241
21.	Mount Mary	Eastern	322	139	461
22.	N.J. Ahmadiyya	Upper West	289	70	359
23.	Ofinso	Ashanti	476	149	625
24.	Ola	Central	0	773	773
25.	Peki	Volta	308	111	419
26.	PTC	Eastern	611	187	798
27.	PWTC	Eastern	0	406	406
28.	SDA, Korofidua	Eastern	513	195	708
29.	St Francis	Volta	351	103	454
30.	St John Bosco's	Upper East	495	113	608
31.	St Joseph's	B. Ahafo	546	166	712
32.	St Louis	Ashanti	0	409	409
33.	St Monica's	Ashanti	0	445	445
34.	St Teresa's	Volta	0	311	311
35.	Tamale	Norhern	451	140	591
36.	Tumu	Upper West	301	31	332
37.	Wesley College	Ashanti	483	184	667
38.	Wiawso	Western	515	155	670
	Total		**12,752**	**6,617**	**19,369**
	% of Total		**65.8%**	**34.2%**	**100.0%**

Source: TED, GES, 1998

[13] The total enrolment figure differs from that in the previous in inconsistent with that given in the previous table. It is possible that they were collected by different departments at different times during the academic year or that one is a revised set of figures in the light of more accurate data. It is not clear which set of statistics is the more accurate.

3.4 Selection of Teacher Trainees

Admission into training colleges follows a two-stage procedure. First, is the selection of candidates who meet the minimum entry qualification, and secondly selected candidates are invited by each college for an interview and to sit short tests in core subject areas.

Two groups are eligible to apply for entry into the TTCs: 'O' level holders, and non 'O' level holders who sit the Senior Secondary Certificate Examination (SSCE).[14] The minimum entry requirements for non 'O' level holders are four credits that have to include English and mathematics, and one other pass; 'O' level holders need a minimum of five grade 'Es'. Candidates are permitted to accumulate the minimum requirements over several years if they do not pass at the first attempt.

Candidates with 'A' level qualifications are admitted on their 'O' level results. There are, however, very few 'A' level applicants. Many colleges tend not to admit 'A' level applicants as they often leave for university once they are able to improve their 'A' level grades. In general, students looking for post-secondary education have a clear order of preference: universities, polytechnics, other further education institutions, and then TTCs. In the context of the school cohort the TTCs receive students from the lower second and third quartiles of senior secondary completers.

Age is not a determinant of selection, but most applicants are between the ages of 20 and 22. It is rare to take people over the age of 35, because of the perceived problems this might cause in terms of relations with other students and tutors. Only a very small proportion of trainees accepted in 1998/99, less than 2 per cent had taught before.

Applications to TTCs are first filtered through a centralised process conducted by the Teacher Education Directorate (TED) to ensure that all candidates have the minimum qualifications. TED in consultation with the college principals draws up a shortlist of applicants to attend interviews and to sit entry examinations at the colleges. The number attending interviews is roughly double the number of places available. Entry exams are devised and assessed individually by each TTC, and these tests vary greatly among colleges in terms of content, scope, structure and difficulty. Across all TTCs, however, written examinations test applicants' abilities in English and mathematics. In addition to written examinations, candidates are interviewed by a selection panel, consisting of the principal and senior tutors. The selection criteria at Wesley Teacher Training College, for example, is scored as follows:

- appearance (5 marks);
- good communicating skills (correct use of tenses, expressions) (10 marks);
- interest in teaching/teaching experiences (5 marks);
- knowledge of teacher education trends/structure and trend of basic education (5 marks);
- knowledge of subject matter in elective area (10 marks);and
- grades in elective subjects (15 marks).

[14] The SSCE was introduced in 1994 and 'O' levels gradually phased out. 1997/1998 was the last year of 'O' level examinations.

The official selection procedure is meritocratic, but in practice the colleges come under pressure from prominent people in the local and educational communities (commonly referred to as "protocol") to admit candidates other than the best qualified. This practice appears to be widespread throughout the TTCs. From interviews conducted at case study colleges, it appears that the number of applicants admitted through protocol varies between ten percent and one-third.[15]

The main advantage of the selection procedure identified by college principals is that the minimum entry requirement weeds out those without adequate qualifications, and the interview and examinations identify those who, despite adequate qualifications, are not best suited to the teaching profession. The main disadvantage of the selection procedure is that principals do not have a totally free hand due to protocol.

3.5 Teacher Training College Tutors

The tutors in the colleges have a variety of qualifications ranging from diploma certificates to graduate level degrees. They can be classified into two broad groups: 'professional' graduate tutors and 'non-professional' graduate tutors. Table 3.3 summarises the distinctions between the two qualification groups of TTC tutors.

Table 3.3: Teacher Training College Tutor Qualifications

Level	Duration of Course	Entry Level	Certificate Awarded
Higher Education (non-graduate level)	3 years	Completion of post-secondary and having taught for 3 years	Diploma Certificate
Higher Education (undergraduate level)	3 years or 2 years for post-Diploma BEd	Teachers holding diploma certificate, or senior secondary leaving certificate*	BEd Degree
Higher Education (postgraduate level)	1 year	Holders of graduate degrees e.g. BA, BSc	Post-graduate Certificate in Education

*The entry level qualification for an undergraduate degree course is in fact a university entrance exam which is set at higher than the post-secondary level.

The total number of teaching staff in the academic year 1994/95 was 846, comprising 69 per cent graduates and 31 per cent non-graduates. Table 3.4 shows the distribution of graduate and non-graduate TTC tutors by subject for the academic year for 1994/95.

[15] Data from preliminary fieldwork conducted by D. Furlong, October-December, 1998.

Table 3.4: Distribution of Tutor Qualification by Subject, 1994/95

Subject	Non-Graduate Tutors	Graduate Tutors
Mathematics	14	96
Science	24	24
Agricultural Science	15	43
Ghanaian Language	1	57
English	75	82
Cultural Studies	1	6
Physical Education	-	38
Life Skills	1	26
Vocational Skills	8	42
Social Studies	60*	4
Accounting	-	3
Religion	10	7
Music	-	29
Technical Skills	-	25
Art	6	16
Total	**269**	**586**

Source: Basic Education Sector Assessment School Review, MOE, 1995a

Note: *Social studies tutors consist of those who have studied geography, economics, political science and history, and not necessarily social studies as a discipline

More recent data on the number and qualifications of TTC tutors in 1997/98 reveal an overall increase to 1,044, and a slight increase in the proportion of non-graduate tutors to 33 per cent. Current policy encourages TTC tutors to gain at least a degree-level qualification, but from the statistics detailed above its impact so far has been limited. This is an issue that needs to be investigated further.

Table 3.5: Teacher Training College Tutors by Qualification and Gender, 1997/98

	No of tutors	Graduate Tutors	Non-graduate Tutors	Male	Female
Total	1044	348	696	821	223

Source: TED/GES Statistics, 1997

The data also show that in 1997 female tutors made up only 21 per cent of the total teaching staff. In the same year, the student population of 20,399, and tutor population of 1,044, resulted in a trainee-tutor ratio of 19.5. As the official trainee-tutor target is 15:1, there is a clear shortage of TTC tutors.

In general, graduate tutors in the TTCs colleges would either have received their training at the University of Cape Coast or the University College of Education of Winneba. Both these universities are teacher training institutions, with the University of Cape Coast mainly training teachers for the second cycle institutions. The University College of Education of Winneba also trains teachers for junior and senior secondary schools. A few of the tutors in the training colleges have no professional teacher training, but hold a bachelor's degree in science or the arts.

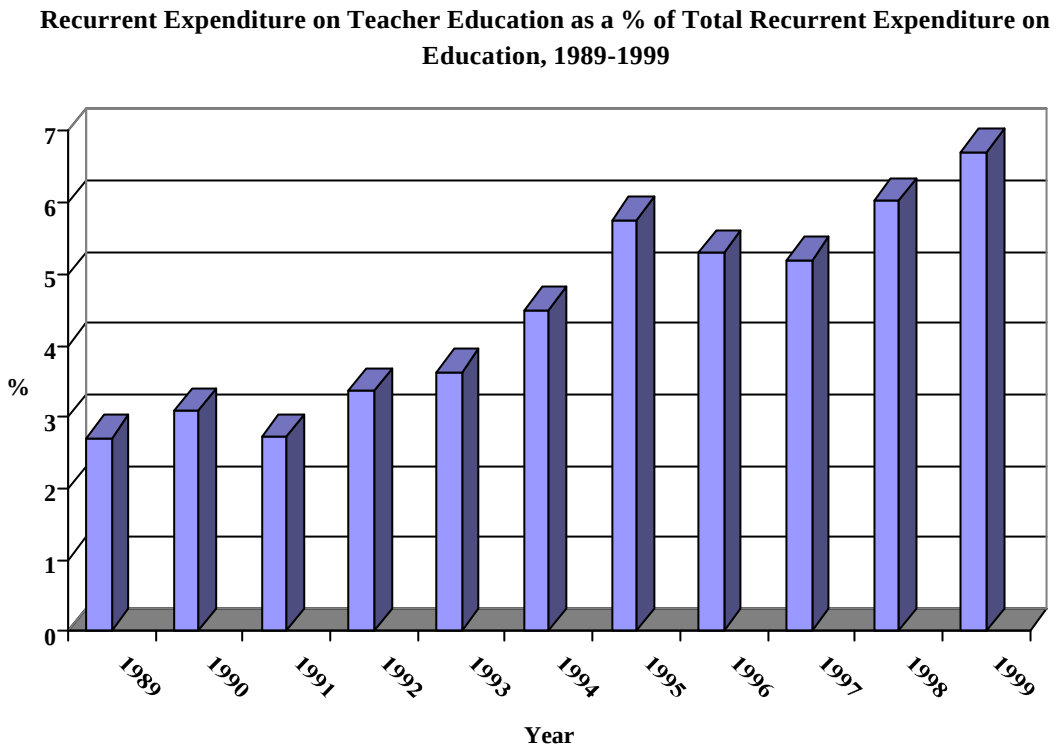
Although most tutors in the training colleges have obtained teaching qualifications at the university level, many have not received training specific to the training of teachers. The training curriculum they would have followed in the universities is not directly related to the curriculum requirements of basic teacher education. Tutors receive on-the-job orientation in terms of the basic teacher education system and its curriculum.

It is necessary to undertake research into what assumptions and perceptions new tutors bring into the training colleges and how these change, if they do, over time. Also, to investigate whether tutors feel their training in the universities, though not specifically geared towards training college teaching, provide them with the necessary knowledge and skills to work in that context, or whether some special emphasis during their training is necessary. For example, students at the University of Cape Coast become quite familiar with the syllabi and curricula of the secondary schools because most of the curriculum studies courses focuses on this context. It could be argued, however, that more attention needs to be given to the curricula of the training colleges at the university level to equip those graduates who will finally work there.

3.6 Financing of Teacher Education

Recurrent expenditure on teacher education is met by the MOE budget. Capital expenditure, however, tends to be funded by donor agencies, and, to a lesser extent, through donations to specific colleges from local community groups and ex-alumni. This section focuses on recurrent expenditure since GOG capital expenditure on teacher education is negligible. In addition, donor assistance was not included in sector budgets until the introduction of new budgeting procedures under the Medium Term Expenditure Framework (MTEF) in 1999. Recurrent expenditure on teacher education covers the costs of the teacher training colleges and the management of the college system. Recurrent expenditure on teacher education as a percentage of total recurrent expenditure on education was estimated at 6.7 for 1999, a significant increase from its share of 2.7 per cent in 1989, despite decreases in the years 1991, 1996, and 1997 (Figure 3).

Figure 3: Recurrent Expenditure on Teacher Education as a % of Total Recurrent Expenditure on Education, 1989 - 1999



Ministry of Education documentation does not refer to any specific policy to increase the share of education recurrent budget to teacher education. Throughout this period of reform, however, the government has consistently articulated its objective that all teachers should receive preservice training to improve the quality of teaching and learning in classrooms. To achieve this goal, in 1992 the government significantly increased the allowances paid to teacher trainees, and from the mid-1990s onwards the number of teacher trainees increased dramatically.

> At the heart of the effectiveness of education reform is the classroom teacher…With the reforms, an increasing number of trained teachers are being placed in the primary and junior secondary schools. The increase in pay for teacher trainees in 1992 has also provided a stronger incentive for candidates to enter the teaching profession, and has resulted in a rare expansion of the teacher training colleges (MOE, 1994:16).

Each year the TTCs prepare budget estimates in relation to annual recurrent expenditure which are submitted to the MOE via the TED. The MOE revises the budgets to keep them within budgetary limits while ensuring that priority items are funded. This process is conducted on an historic basis such that college budgets reflect that of the previous year with an increase to accommodate the effects of inflation. According to TTC accountants, in theory budget estimates are also adjusted to reflect changes in trainee numbers, but they pointed out such adjustments tended to be arbitrary (and often unscientific).

The Ministry of Education makes allocations to teacher education recurrent budget under two headings: GES Headquarters' Services, and GES Schools and Regional Offices. Recurrent expenditure on teacher education under GES Headquarters' Services budget heading is used to finance the management of teacher education system at the national level through the TED. Recurrent expenditure on teacher education under the GES Schools and Regional Offices budget heading is used to finance the administration of teacher education at the regional and district levels and cover TTC running costs. Table 3.6 presents data showing how the total recurrent budget to teacher education was allocated between these two budget headings for the years 1993-1997.

Table 3.6: Allocation of Recurrent Expenditure to Teacher Education between GES Budget Headings, 1993-1997

Year	1993	1994	1995	1996	1997	Average 1993-97
GES Headquarters	1.9%	1.5%	4.4%	3.0%	5.7%	3.3%
GES Schools and Regional Offices	98.1%	98.5%	95.6%	97.0%	94.3%	96.7%

Source: Finance and Administration, MOE, 1998

Although there has been some fluctuation in the distribution of recurrent expenditure to teacher education between the two budget headings, the proportion allocated to GES Schools and Regional Offices averaged over 96 per cent of the total between 1993 and 1997.

Data showing the disaggregation of the GES Schools and Regional Offices teacher education budget between the administrative functions of the Regional and District Education Offices and expenditure by the TTCs could not be obtained. In the absence of this information it is assumed that the former is negligible relative to the latter, such that data on expenditure under the GES Schools and Regional Offices heading is taken to be comprised almost exclusively of TTC running costs.

Each budget heading is further divided into expenditure items. Item 1 represents expenditure on personal emoluments - salaries of teaching and non-teaching staff, and allowances paid to trainees; item 2 travel and transport; item 3 general expenditure; item 4 maintenance, repairs and renewals; and item 5 supplies and stores. In theory budgetary allocations are fixed and cannot be transferred between items.

The data presented in Table 3.7 below summarise actual recurrent expenditure for the TTC in terms budgets item 1, 'personal emoluments', and other expenditure under

budget items 2 to 5. The data presented in Table 3.7 indicate that over 90 per cent of the recurrent expenditure allocated to the TTCs is spent on personal emoluments. 'Other expenditure' items that enhance the efficiency and effectiveness of the colleges comprise less than 10 per cent of the total recurrent budget allocated to TTCs. This undoubtedly has implications for the quality of training since the very low budget allocation means inadequately and poorly maintained infrastructure and insufficient supply of teaching and learning materials.

Table 3.7: Allocation of Recurrent Expenditure to GES Regional Offices and Schools between Personal Emoluments and Other Expenditures, 1993-1997

year	1993	1994	1995	1996	1997
Personal Emoluments	92.9	94.8	91.7	92.7	94.5
Other expenditures	7.1	5.2	8.3	7.3	5.5

Source: Finance and Administration, MOE, 1998.

As described above personal emoluments consist of salary payments to teaching and non-teaching TTC staff, and trainee allowances. Data on recurrent expenditure on teacher trainee allowances are not available at the time of writing, and are difficult to obtain precisely because this category of expenditure does not have a separate budget heading. Penrose (1996:46), however, states that in 1995 the teacher training allowances comprised 80 per cent of the personal emoluments budget item.

A rigorous analysis of the unit costs of teacher education requires disaggregation of the budget items, and, in particular, the personal emoluments budget item. The absence of this data notwithstanding, it is clear that recurrent expenditure on personal emoluments heavily influences the overall and unit cost of teacher education.

The trainee allowances are intended to cover the living costs and purchase of materials necessary for the teacher training course. Trainees receive the allowance on a monthly basis throughout the year, even outside of term-time. Thus, over the three-year course a trainee will receive 36 instalments of the allowance. The trainee allowance increases with each of year of study and is set by the Ministry of Education. The allowance is administered by the TTCs. In theory, the trainee allowance in each year of study should be the same across all colleges. Further research into this matter is required as this has clear implications for efficiency of the system.

The TTCs deduct trainee fees from the allowances directly. Fees are levied for the feeding of trainees during term time, equipment, registration, etc. It is only since the mid-1990s that the charging of trainee fees by TTCs has been officially sanctioned and guidelines produced by the TED in regard to what fees can be charged and how much they should be. Further investigation is required into who sets the fees and how the process is monitored. Moreover, this raises a question about the generosity of the trainee allowances in relation to the fees charged by the TTCs. Again, this warrants further investigation.

3.7 Conclusion

This chapter has identified that the number of new teacher trainees each year does not appear to be linked to the demand for teachers from the schools. There is a need for analysis of teacher supply and demand to inform future teacher trainee enrolment policy. The absence of a clear policy on trainee enrolment notwithstanding, there was a significant increased of over 50 per cent in teacher trainee enrolment between 1993 and 1998. The trainee selection procedure ensures that applicants have the minimum requirements. The college principals, however, are subject to pressure from key figures in local communities and the educational establishment to admit applicants other than the best qualified. This is a clear source of inefficiency that undoubtedly has implications for the trainee pass rate, and the quality of teaching and learning in schools. Most TTC tutors have obtained teaching qualifications at the university level, but many have not received training specific to the training of teachers. Arguably, this has implications for the effectiveness of teacher education, and ultimately teaching and learning outcomes in Ghanaian schools.

Recurrent expenditure on the TTCs reveals that over 90 per cent of the budget is spent on 'personal emoluments', that is, the salaries of TTC teaching and non-teaching staff and the allowances paid to the trainees. Only 10 per cent of expenditure is allocated to other items that enhance the efficiency and effectiveness of the colleges, such as maintaining the college infrastructure and the supply of teaching and learning materials. It appears, however, that by far the largest item of expenditure under the 'personal emoluments' budget line is the trainee allowance, which comprised 80 per cent of the total in 1995. The size of the total expenditure on trainee allowances is such that it heavily influences the overall and unit costs of teacher education, and warrants a more detailed analysis.

CHAPTER FOUR

INNOVATIONS IN BASIC TEACHER EDUCATION

4.1 Introduction

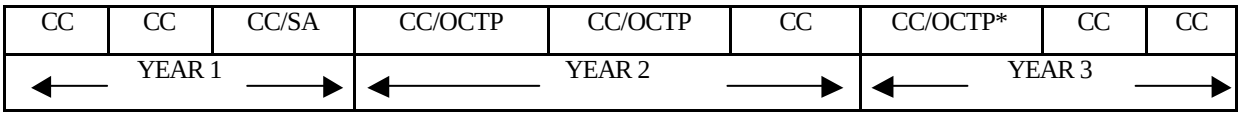
This chapter reviews the new proposals put forward for a restructured basic TTC curriculum, and examines the key issues in curriculum reform. The philosophy of the new proposal for basic teacher education in Ghana focuses on a task-oriented and competency-based curriculum. The rationale behind this is the need to expose the teacher trainees to the realities of practical teaching in the actual classroom context. The idea is to make provision for the development of teaching competencies over a substantial period of time which, until now, has not been considered possible because of college tutors' focus on teaching academic subject knowledge during training. The current teaching practice system is considered to be lacking in scope and content in terms of graduated forms of teaching skills and work experience.

4.2 Proposals for a Restructured Initial Teacher Education Programme

Initially, the TTC programme structure was described as the 'in-in-out' scheme. In this scheme a trainee was expected to spend the first two years of the three-year programme in the college and the third year involved in work-study in a primary school. The third year was therefore intended to provide an opportunity for the trainee to study and learn to teach by teaching in a real classroom. Practical training in teaching was also to take place at the teacher training college, mainly through the improvisation of instructional materials and on-campus teaching practice. It was envisaged, however, that the actual development of teaching competencies would take place during the 'out' period when trainees are based in schools.

Prior to the implementation of the 'in-in-out' scheme, it was planned as a first phase to put into place a modified version of the scheme, as shown in Figure 4.

Figure 4: Modified Version of the 'in-in-out' Scheme



Key:
CC Coursework in college
CC/SA Coursework in college and school attachment
CC/OCTP Coursework in college and on-campus teaching practice
CC/OCTP* Coursework in college and off-campus teaching practice

The idea behind this scheme is that the training process must incorporate adequate opportunities for relating theory to practice. The new scheme was to be piloted in 10 training colleges beginning in the 1998/99 academic year.

An innovative feature of the new teacher education scheme was that recruitment of teachers for initial teacher training would be carried out by the district offices in accordance with the needs of schools in the districts. Teacher trainees were to be sponsored by districts and after their training would be bonded to teach in that district for an agreed minimum period. This was to solve the problems of maintaining staff in rural schools.

The proposed framework for the assessment of teacher trainees has been drawn up to give emphasis to college and school-based assessments as a means of improving the link between training and assessment procedures. Basically, the aim of assessment is to provide evidence of skills and basic competencies expected of a beginning teacher. What specific assessment tools will be used to provide such evidence, and the nature of criteria for judging them, however, has not been explained. Both second and third year assessments are of particular interest because during this period trainees are expected to spend an extensive period of time in real classrooms developing further professional qualities and skills. During this period, therefore, assessment is expected to relate more to the development of teaching skills rather than simply cognitive knowledge.

These new proposals for initial teacher education have not been implemented, as it seems to have become increasingly evident to policymakers that both the college and school systems lack the necessary management support structures and teacher professionalism to ensure success of the proposed programme.

4.3 Issues Raised by the Proposed Innovations in Basic Teacher Education

With mounting evidence suggesting that many school teachers in Ghana will require training to upgrade their knowledge and improve their teaching (Fobih *et al*. 1999), trainees may not gain significantly from school-based training that requires significant input from teachers.

For the college-level training to impact on professional knowledge and skill development, there would be the need for improved efficiency in college management. The proposed innovations call for a high standard of professionalism in the colleges and this, it appears, may be lacking. The JuSSTEP impact study (1993) revealed that the majority of the college's intra-departmental communication flows were hindered by the lack of formal meetings within the departments. For example, there was little evidence of planning of group teaching strategies to develop approaches to the heavy workloads resulting from high student-teacher ratios.

Although the proposed system of assessment, in principle, seems appropriate since it attempts to increase the validity of teacher training assessment, its practice may prove problematic. With the challenges faced by the assessment system, particularly the entrenched culture of examinations, poor management of college assessment, etc., the increased validity expected may prove difficult to achieve. Existing examination practices occur within a social and political context which is resistant to the changes proposed.

In summary, there is the need for more detailed research into the factors that account for the seeming poor quality of teaching and learning in the TTCs. For example, how are college tutors managing their teaching in the face of logistical problems? What do trainees bring to training in terms of previous experiences, and how can these be tapped to serve as useful starting points for teacher learning and development? What skills and knowledge are colleges able to impart to trainees? How can the colleges forge closer professional links with schools to share in the training of student teachers, and what are the implications for training college curriculum design and school management? A better understanding of the challenges that face teacher training for basic education is required before policies can be designed and implemented for its improvement.

4.4 Overview of the Current TTC Course Structure

Although the new proposals for TTC course structure have yet to be implemented, some changes to the training programme have occurred. This section provides an overview of the changes that are currently in place.

The TTC course remains a three-year programme for all the 38 teachers training colleges and consists of 33 weeks per year. The major components of the curriculum are:

- foundation academic and general studies;
- education studies;
- curriculum studies integrated with methodology; and,
- practicum and other practical activities.

Foundation academic and general studies courses are undertaken during the first year of training. The three remaining aspects of the curriculum are taken during the second and third years.

4.4.1 Year 1 Curriculum

The organisation of the coursework and the teaching-learning activities over the three-year period is as follows. The first year programme covers foundation academic study of the subjects in the basic education curriculum. Academic first year courses are intended to build on the education received at the senior secondary school level and are remedial in emphasis. The purpose is to strengthen the academic background knowledge of trainees before they embark upon professional studies. It is argued that most trainees possess weak academic subject background knowledge and this undermines their confidence and ability to teach effectively. Development of subject specific content knowledge, therefore, is at a different time (only first year) from the curriculum studies and methodology, and practicum. A common concern among many teacher educators in Ghana is whether content knowledge should be developed in parallel with pedagogic content knowledge or at different times in the programme. It is argued that, under the old curriculum arrangement tutors spent more instructional time on subject content knowledge at the expense of pedagogic content knowledge and teaching skills development. The new programme arrangement is intended to ensure the remaining two years of training are focused entirely on developing

pedagogic knowledge and teaching skills. Introductory courses in education are also offered in the first year. In summary, the philosophy of training in the first year is that subject knowledge competency precedes professional knowledge and training in skills development.

Year 1 assessment is intended to be promotional and comprises internal and external examinations. Students who demonstrate poor academic ability in these examinations are withdrawn from the training programme under the assumption that prospective teachers require a sound subject knowledge base before they can move onto the practical elements of learning to teach. This raises the issue, however, of how a 'sound' subject knowledge base can be measured. Current assessment practice has a 40 per cent pass mark in all subjects. If indeed the model of teacher training is competency-based then the idea of a sound subject knowledge base requires clearer definition than the use of an arbitrary pass mark.

There is also an economic argument for the introduction of the new first year promotional examination. As candidates failing the end of first year promotion examination are withdrawn, this saves on the allowances they would have received in the second and third years (initial teacher trainees in Ghana receive a monthly stipend throughout the three years of their training). The conditions for promotion in the first year are set out as follows:

External examination

1. Five subjects are externally examined (one three hour examination per subject). These core subjects are: environmental and social studies or technical skills, integrated science or French (offered in one college only), English, Ghanaian language and mathematics.

2. First year students must pass, i.e. attain a minimum of 40 per cent in all five subjects or pass in four, with the fifth subject not below 35 per cent.

3. A student passes also if he/she scores 39 per cent in two subjects and 40 per cent and above in the other three subjects.

Internal examination

1. Students must pass all internal subjects (2 hours in duration) which are religious and moral education, music and dance, physical education, and vocational skills.

2. Students who fail three or more internal subjects can re-sit these internal examinations before the beginning of the second year.

3. Those who fail the re-sits in the internal are withdrawn.

Questions for these examinations are obtained from a question item bank produced by subject panel college tutors and a chief examiner from the Institute of Education at the University of Cape Coast.

4.4.2 Year 2 Curriculum

In the second year, education is studied as well as curriculum studies and methodology of individual subjects. Apart from education, syllabi have yet to be developed for the curriculum studies and methodology of all nine subjects. The second year curriculum also includes a school attachment programme and an on-campus practicum (teaching practice).

The philosophy behind the second and third year programme is that trainees should see themselves as being trained to become professional teachers and this requires that professional knowledge is applied in teaching and learning situations. It is interesting to note that the emphasis appears to be on the use of professional knowledge in teaching and learning situations, as opposed to classroom teaching and learning situations providing the context for developing appropriate teaching and learning strategies.

The rationale behind 'curriculum studies integrated with methodology' is for methodology not to be treated as an isolated, abstract, and theoretical segment of teacher training, but taught using the very methods that trainees would be expected to employ at the basic school level.

It is important for curriculum research to examine the actual instructional methodologies employed by college tutors, and the forces that influence instructional practice. Interview evidence from tutors in four case study colleges suggest that the non-availability of textbooks, reference materials, visual aids, as well as the high student-tutor ratio compels most tutors to resort to lectures.[16] A more analytic evaluation of instructional time, space and practices in the colleges has be to undertaken to ascertain whether the much referred to limitations reflect lack of management efficiency or are an incontrovertible college organisational problem.

Year two assessment is both by internal continuous assessment and external end-of-year examinations.

4.4.3 Year 3 Curriculum

Education, curriculum studies and methodology form the main programme for the third year. Off-campus teaching practice is organised in the second and third terms of the third year programme. Assessment is by both continuous assessment and external examination, based on education, curriculum studies and methodology of the nine subjects.

4.4.4 Practicum and Teaching Practice

Practicum

Emphasis in the second and third years is on practicum. The practicum comprises:

[16] Fieldwork conducted by Akyeampong, 1998-1999.

- School attachment for observation of teaching and work practice;
- On-campus teaching practice to expose student teachers more formally to teaching skills;
- Off-campus teaching practice to practice skills; and,
- Project work based on the planning and construction of teaching/learning materials and classroom action based research.

The current system of teaching practice is not expected to change very much except for the possible changes in the system of assessment. A new system for assessment has been developed which places emphasis on trainee professional competencies. The new system of assessment uses competency profiles, instead of the current numerical five-point scale. Although the change to a profile-based system of teacher evaluation has been accepted, it has yet to be implemented.

Specific proposals for structural changes to current teaching practice are presented in the next section. The structure of current teaching practice in training colleges is essentially similar although colleges have the freedom to make slight modifications.

Teaching Practice – General Organisation

Teaching practice is composed of three segments each lasting one month, thus making up 12 weeks. A school attachment/observation programme for first year trainees precedes actual teaching practice. This takes place during the long vacation that is, after the first year course and before the second year, and involves lesson delivery observation. This component of the practicum is not assessed. The aim is to provide first year students with an insight into the teaching-learning situation in schools and classrooms. In the current proposals for the school attachment programme, trainees are expected to reflect on their school experiences using an open-ended observation schedule. At the beginning of the second year course in education studies, tutors are expected to provide an opportunity for reflective analysis of school and classroom observation. The current proposal for second year teaching practice is for it to be college-based, 'on-campus' teaching practice. Students are expected, in this model, to do four periods (each lasting 45 minutes) of peer-group teaching practice throughout the entire second year. It is not clear when this will begin. Currently, however, all second years do four weeks off-campus teaching practice. In the third year students are expected to do another four weeks of teaching practice.

The District Director of Education grants permission for schools in a district to be used for teaching practice. Students are expected to experience teaching at the two levels of the basic school system – primary and junior secondary. A group of college tutors (normally five), with one as the team leader, are assigned to a cluster of schools in which students undertake teaching practise. Each student is expected to receive at least two supervisions a week for the duration of teaching practice.

Teaching Practice Assessment

As described above, a new framework and system for teaching practice has been developed and is intended to be adopted in the colleges. Again, it is not clear when this change will be implemented. The timing is subject to agreement over the

necessary implementation strategies by the Teacher Education Division of the Ghana Education Service.

Currently, a five–point, attitudinal, Likert-scale type of assessment form is used. To achieve an overall pass for teaching practice students must obtain an average score of 40 per cent - averaged from the total number of externally supervised teaching practice.

In order to qualify as a trained teacher and be awarded the teachers' certificate 'A', a trainee must pass his/her teaching practice, that is obtain a minimum average score of 40 per cent from teaching practice. The intention is for this system of assessment to be replaced by a competency-based model. The current method of teaching practice assessment has been criticised for being too 'marks-oriented', and thus undermining the value of focusing both trainees' and supervisors' attention on the development of appropriate classroom skills and knowledge.

4.5 Conclusion

In conclusion, basic teacher education in Ghana has undergone several changes and is still undergoing changes in an attempt to produce teachers that will improve teaching and learning outcomes. Unfortunately, teacher education policies to-date have not been informed by research. It is insufficient simply to introduce a training programme that aims to increase the annual output of trained teachers, when for example there is a high attrition rate of teachers in the field, or when trained teachers find their training alien to the schools they go to teach in. Trained teachers' experiences in the early years of teaching needs to be researched to provide information that will help in the restructuring of teacher education curriculum. For example, multi-grade teaching and large group class teaching may need to be a significant feature of training as these instructional situations are typical of many schools. The idea that, for example, on completion of in-college training trainees then need to complete one year satisfactory teaching in schools prior to full certification, (Perraton 1997; World Bank 1996) ignores crucial assumptions underpinning such a model of teacher training and development that may be lacking in Ghana. For example, there is well-documented evidence that many schools in Ghana suffer from poor management and professional practices that are necessary to create the environment for effective teacher learning and development (see Korboe and Boakye, 1997; Fobih *et al.*, 1999). School-based training may, therefore, not offer adequate input that is often desired because of such obstacles. The key obstacles are identified below.

Large student teacher ratios in many of the teacher training colleges seriously affect the quality of instruction and assessment. The issue of importance is how tutors can be encouraged to change their attitudes to embrace the new programme when the motivation to do so may be lacking due to the possibility of increased workload. For example, in 1993, the range of students taught by a tutor in the training colleges could vary from about 67 to 630 depending on the subject being offered (see Table 4.1). It has to be noted that colleges have to make some important decisions regarding the number of subject tutors they will employ since official quota regulations will not permit them to employ over and above a certain number. Besides this there are problems of availability of certain subject tutors. Colleges have teaching staff

strengths ranging between 30 and 40. In Table 4.1, for example, if St Joseph's has only one science tutor. He/she has responsibility for all 630 students across the three-year training period who are required to take science. This obviously has adverse implications for teaching methods and assessment practices. The issue of excessive student-tutor ratios, therefore, needs to be addressed if the restructured training programme is to be introduced effectively.

Table 4.1: Student-Tutor Ratio

	Number of Students to a tutor by subject*				Overall Student-Tutor Ratio**
College	**English**	**Education**	**Maths**	**Science**	
Akaatsi	222	166	271	263	22
Presby	132	159	193	200	19
Dambai	162	161	226	86	27
Holychild	117	117	227	202	18
Jasikan	137	137	156	120	16
Kibi	114	114	90	192	15
Atebubu	105	105	158	88	14
Bagabaga	247	247	185	150	27
St Joseph	152	156	315	630	19
Tumu	100	67	100	143	10
N.J. Wa	164	109	109	167	16
Wesley	149	186	149	137	23
General Ratio	**159**	**144**	**186**	**198**	**18**

The move towards college and school based assessment means that the colleges will have greater responsibility for setting and managing assessment. The effectiveness of this will be limited, however, by the high student-tutor ratio which renders the number of assessment tasks per student excessive in terms of marking load.

The calibre of some staff members in the TTCs including their level of professional competence and personal attitudes to the profession may be a hindrance to quality improvement. It was pointed out earlier in this study that tutors may not be receiving the appropriate training to prepare them to work in teacher education. Akyeampong (1997) has argued that the academic and examination focus of university courses for teacher training is a major hindrance to professional teacher development in Ghana. Unfortunately, the education reforms in Ghana have made little impact on the structure and content of courses on offer in the universities.

The JuSSTEP impact study (1993) revealed that the majority of colleges' inter-departmental communication flows were hindered by the lack of formal meetings within the departments. For example, there was very little evidence of planning of group teaching strategies to develop approaches to deal with increasing workloads created by large student numbers in certain subjects in some TTCs, continuous assessment and examinations. There is, therefore, the urgent need for increased efficiency in college management.

Any good organisation is characterised by its ability to grow and develop. The teaching profession is not an exception. As ideas in teaching change and new methods of teaching are devised, it is necessary for teachers to be sensitive to the

appropriateness of these new methods to their own changing situations, and the needs of their pupils. This calls for a continuing system of in-service education which provides for the professional development of teachers. There seems to be a lack of clear policy on in-service education of teachers in Ghana. Without careful attention to sustainability, in-service courses organised during major education reform projects with external support and funding run the risk of fizzling out once this external assistance is withdrawn (e.g. JuSSTEP project, 1989-1993). There needs to be a policy of in-service that is part and parcel of the professional training and development of teachers. It is important that alongside the new initiatives in teacher education in Ghana there is ongoing evaluation of the effectiveness of strategies and innovations.

Finally, there is the need to build in feedback mechanisms in order to ensure practicality of innovations in a realistic context. For example, the current interest in school-based training through school attachment means that practising teachers must be given training in how to supervise and assess the trainee teacher in the classroom. It is not clear now this training is going to be organised. A more critical issue is whether the education system in Ghana is conducive for this kind of training. With a lot of evidence suggesting many school teachers will require training to upgrade their knowledge and practice in teaching, how is the trainee teacher to benefit from a model of training that requires him/her to learn from these practising teachers?

The new system of assessment, in principle, is appropriate. The critical question is, however, how will it fare in practice, when the issues and conditions that have contributed to the ineffectiveness of the present continuous assessment system still remain?

In conclusion, there is the need for the factors that account for the seeming poor quality of teaching and learning in the colleges to be critically researched. For example, are the curriculum-related issues, logistical inadequacies in the provision of teaching and learning materials, problems in terms of professional standards of teachers, low teacher motivation, or a combination of all these factors? Akyeampong (1997) observed that although some training colleges had a good supply of teaching and learning materials, many teachers were not using them. Instead, they preferred to lecture and dictate notes. These tutors explained that the conditions under which they worked, such as large student numbers, poor working conditions, culture of examinations, etc. made changing to more appropriate means of training unattractive.

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Appendix 1

Table A1.1: Total Enrolment in Primary Schools (Public), 1981–1996

Year	No. of Schools	Enrolment	% increase in Enrolment
1981/82	8,082	1,434,573	-
1982/83	8,395	1,482,090	3.3
1983/84	8,503	1,522,094	2.7
1984/85	8,683	1,552,895	2.0
1985/86	8,937	1,574,927	1.4
1986/87	9,193	1,610,012	2.2
1987/88	9,424	1,625,137	0.9
1988/89	9,368	1,598,443	-1.6
1989/90	9,831	1,703,074	6.5
1990/91	10,623	1,803,148	5.9
1991/92	11,142	1,807,233	0.2
1992/93	11,270	1,848,300	2.3
1993/94	11,369	1,910,408	3.4
1994/95	11,218	1,920,803	0.5
1995/96	11,435	1,955,713	1.8
1996/97	11,775	2,027,183	3.7

Source: Planning, Budgeting, Monitoring and Evaluation Division, MOE, Republic of Ghana, October 1998

Table A1.2: Enrolment in Middle/JSS Schools (Public), 1981–1996

Year	No. of Schools	Total	% increase
1981/82	4,581	568,665	-
1982/83	4,875	580,809	2.1
1983/84	5,127	595,400	2.5
1984/85	5,207	605,241	1.7
1985/86	5,276	611,867	1.1
1986/87	5,364	632,142	3.3
1987/88	5,260	610,094	-3.5
1988/89	5,169	608,690	-0.2
1989/90	5,136	625,018	2.7
1990/91	5,136	569,343	-8.9
1991/92	5,135	592,867	4.1
1992/93	5,129	629,258	6.1
1993/94	5,217	655,642	4.2
1994/95	5,241	659,851	0.6
1995/96	5,394	677,641	2.7
1996/97	5,597	695,468	2.6

Source: Planning, Budgeting, Monitoring and Evaluation Division, MOE, Republic of Ghana, October 1998

Appendix 2

Table A2.1: Dropout Rates for Primary (Public), 1991-1996

Drop-out Rates (%)	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
P1	4.4	12.6	9.3	6.7	9.2	7.1
P2	1.9	6.3	3.4	0.6	2.9	1.0
P3	2.4	5.4	3.1	1.9	3.9	1.8
P4	4.1	6.4	4.7	3.6	5.6	4.2
P5	2.7	5.1	2.4	2.8	4.3	3.1
P6	1.4	3.9	2.3	3.6	6.3	4.6
Primary Average	**2.8**	**6.6**	**4.2**	**3.2**	**5.4**	**3.6**
JSS1	5.6	9.1	6.1	6.4	8.9	9.5
JSS2	8.6	10.6	7.7	7.6	10.2	8.6
JSS Average	**7.1**	**9.9**	**6.9**	**7.0**	**9.6**	**9.1**

Source DFID 1998: 48

Table A2.2: Repetition Rates for Primary and JSS (Public), 1991-1996

Repetition Rates (%)	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
P1	6.6	5.5	5.5	6.3	6.2	7.2
P2	3.2	3.5	3.5	3.6	3.7	4.0
P3	2.4	2.8	3.0	3.0	3.0	3.4
P4	1.9	2.3	2.6	2.6	2.7	3.1
P5	1.6	1.9	2.3	2.3	2.5	2.7
P6	1.8	2.1	2.6	2.5	3.0	3.3
Primary Average	**2.9**	**3.0**	**3.3**	**3.4**	**3.5**	**4.0**
JSS1	1.4	1.1	1.3	1.4	1.9	0.2
JSS2	1.8	1.8	1.9	1.8	2.3	2.1
JSS3	1.0	0.9	0.8	0.5	0.4	0.5
JSS Average	**1.4**	**1.3**	**1.3**	**1.2**	**1.5**	**0.9**

Source DFID 1998: 48

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