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Basic Education for Self-Employment and Rural Development

A Sub-Sector Study

March 22, 1989

Africa Country Department IV
Population and Human Resources Division

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CURRENCY EQUIVALENTS

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ACRONYMS

BGL Bureau of Ghana Languages
CDR Committee for Defense of the Revolution
CRDD MOEC Curriculum Research and Development Division
DCD Department of Community Development
DNFE Division of Non-Formal Education
DSW Department of Social Welfare
ERP Economic Recovery Program
GBC Ghana Broadcasting Corporation
GES Ghana Education Service
GIMPA Ghana Institute of Management and Public
Administration
GLSS Ghana Living Standards Survey
GNCAE Ghana National Council for Adult Education
GRATIS Ghana Regional Appropriate Technology Industrial
Service
IAE Institute of Adult Education
ICCES Integrated Community Centers for Employable Skills
IEPA Institute for Education Planning and Administration
JSS Junior Secondary School
MOEC Ministry of Education and Culture
MSLC Middle School Leaving Certificate
NCC National Crafts Certificate
NSS National Service Secretariat
NVTI National Vocational Training Institute
NYOC National Youth Organizing Commission
OIC Opportunities Industrialization Center
PAMSCAD Program of Action to Mitigate the Social Costs of
Adjustment
PNDC Provisional National Defense Council
SSS Senior Secondary School

FISCAL YEAR

January 1 - December 31

SCHOOL YEAR

September - June

BASIC EDUCATION FOR SELF-EMPLOYMENT AND RURAL DEVELOPMENT IN GHANA

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This report is based on the work of a joint Bank/Ghanaian study team, which conducted field investigations in August 1988. The team consisted of Nicholas Bennett (World Bank, mission leader), William Ahadzie (Ministry of Manpower and Productivity), Joe Allan (farmer), Napa Bhongbhibhat (consultant), Horace Gilbertson (Ghana Broadcasting Corporation), David Gooday (consultant), Keith Hinchliffe (consultant), Peter Kpordugbe (Ministry of Education and Culture), Janet Leno (consultant), and Patrick Obeng-Fosu (Ministry of Manpower and Productivity).

Summary of Main Recommendations

1. This sub-sector study was undertaken in response to Government's concern about the need to prepare Ghanaians to become productively employed. While the rate of growth of formal sector ^{1/} jobs, including those in the public service, is slowing dramatically, the numbers of employable youth are rising. Given these constraints, it is essential that most young Ghanaians be equipped to work productively on their own, either in agriculture or as informal sector craftsmen. To meet this challenge, Government felt that the country's education and training systems (formal, informal, and non-formal) must be strengthened.

2. The study is based on information and data obtained through visits to a wide range of schools, training centers, adult literacy programs, and radio stations throughout the country, as well as through discussions with informal sector craftsmen and government officials. ^{2/} Although the main body of the report is divided by type of education or training, with part II dealing with formal (full-time) education, Part III with radio support for all types of education, and Part IV non-formal (part-time) functional literacy, the main recommendations have been divided into what are considered to be two key areas, drawing from the whole report. These two areas are: promoting literacy and numeracy, and skills for productive self-employment. The main recommendations are as follows:

Promoting Literacy and Numeracy

3. Rural and informal sector productivity can be increased by ensuring that children who have attended school for at least six years are functionally literate and numerate; increasing significantly primary school intake and enrollment ratios; mounting a massive functional literacy campaign; and creating a literate environment so that literacy once learned is not forgotten. To achieve these goals the team recommends:

a) teachers should be made accountable for the achievements of children in their schools. Where minimum levels of achievement are not reached, schools should face withdrawal of government aid.

b) each year during the next three years all basic education teachers should receive at least two weeks of residential inservice teacher training. At least ten of the existing teacher training colleges should be turned over to become short inservice training centers for primary and JSS teachers.

^{1/} Formal sector employment refers to employment for a regular wage or salary, usually in the organized modern sector.

^{2/} A list of all schools, institutions, and organizations visited by the study team is found in Annex i-1.

c) an attempt should be made to produce interesting and effective school broadcasts to help upgrade the technical skills and motivation of teachers, as well as to make classroom instruction more entertaining. This will require that radio producers be trained, all air time available for in-school broadcasts be devoted to basic education, a limited number of high-quality programs produced, and support materials developed.

d) the monitoring and inspection of basic education schools be intensified and made more effective. Circuit officers should be contractually obliged to make detailed inspection visits to all schools in their clusters at least five times during the academic year.

e) children must continue to have access to textbooks and other learning aids. In addition, the policy of teaching children during the first three years in school in their mother tongue must be supported with the necessary materials and inservice teacher training, and strictly enforced.

f) detailed preparation for a mass, action-oriented functional literacy campaign should start immediately, the approach tested in autumn 1989, tested again on a larger scale in 1990, and implemented nationwide in 1991. The preparation and testing of literacy materials in at least 11 languages will require that substantial staff and budgets be provided to the Ministry of Education and Culture. Resources of the order of \$1,500 million by 1991 will be needed, to be provided by Government and donor sources. Radio should play a key role in the campaign. To ensure that newly-acquired literacy skills are not lost, a literate environment must be maintained through the production and distribution of newspapers in national languages and the development and production of books and pamphlets for entertainment and development purposes will also be needed.

Skills for Productive Employment

4. Efforts to provide young people with skills for productive employment can be achieved by ensuring that JSS provides youths with a familiarity with tools, a manual dexterity, and basic farming skills, and by radically reforming post-basic-level artisanal training so that a central role is played by master craftsmen with support from the formal training system. In addition, a positive environment is required if the informal sector is to grow. To achieve these objectives the team recommends:

a) all teachers of JSS practical subjects, including agriculture, technical, and vocational/life skills, should receive four weeks per year of intensive inservice training designed to instruct them to teach the particular program that year.

b) agricultural extension agents should be instructed to use school farms as demonstration farms and support the teaching of agriculture in JSS.

c) a booklet entitled "This is Your School" should be produced and distributed to all community leaders. The booklet, combined with radio broadcasts, should explain what the communities must do to ensure success of their JSS.

d) the entire system of skill training should be radically reoriented to concentrate on preparing youth for the informal sector employment opportunities that do exist. The National Vocational Training Institute (NVTI) should concentrate on trades testing (replacing the City and Guilds of London test with a more practically-oriented test), syllabus and curriculum development, and the training of masters of apprentices. The technical institutes run by the Ghana Education Service should stop running their three- and four-year training courses, and initiate instead one-year (or shorter) courses for youth who have been apprentices for at least two years.

e) informal sector artisans, especially youth, should be helped and encouraged to establish neighborhood trade associations or cooperatives, and that community-guaranteed loans be provided to new entrants through such facilities as the rural finance project or the private small and medium enterprise development project.

f) Government should actively encourage informal sector enterprise, stopping, for example, activities of bodies such as the Accra Traffic and Sanitation task force that have recently prevented informal sector craftsmen from serving their clientele.

PART I

BACKGROUND

Chapter 1

The Education Reform and Its Objectives

1.1. In the 30 years since independence much has changed in the Ghanaian education system. Despite a more than doubling of the population, enrollment rates at all levels have increased significantly, the number of schools and colleges has increased several fold, the number of teachers has grown considerably faster than that of students, and real unit cost allocations at all levels have fallen dramatically. It is perhaps only the curriculum that has not changed, maintaining its academic colonial orientation and structure, which as the years have gone by have become increasingly irrelevant to Ghana's political and economic development concerns.

1.2. From the end of the First Republic in 1966 until the beginning of the Economic Recovery Program (ERP) in 1984 very little attention was paid by Government to expanding and improving the quality and effectiveness of rural basic education. As the total amount of real resources for education stagnated or shrunk from the early 1970s, increasing proportions of available resources tended to be devoted to maintaining a high-quality but entirely inappropriate education in a small number of urban primary and well-established boarding secondary institutions.

1.3. The 1973 education commission, with its 1974 report "The New Structure and Content of Education," realized that if education was to play a role in the development of Ghana, instead of merely providing Ghanaians with the skills needed to find employment abroad, major changes were required. There would have to be a radical restructuring of the education system by reducing pre-university education from 17 to 12 years, and a change in the curriculum, by reintroducing Ghanaian languages at all levels and making them the medium of instruction for the first three years of schooling, and at the same time introducing practical and vocational skill training, especially at the Grade 7-9 level. A combination of influential vested interests and the economic decline of the late 1970s prevented the recommendations of this commission (which were accepted by Government) from being implemented.

1.4. By the early years of the ERP overall enrollment growth at all levels of education had sunk to levels lower than the growth of the school-age population, and the decay of those parts of the system patronized by the mass of the population was so marked that it was doubtful whether children were learning anything. More than half the teachers were untrained, there were virtually no textbooks in the schools, there was no inspection or supervision, and the few resources available were used to employ superfluous staff rather than purchase essential educational materials. In addition, pilferage and theft had reached endemic proportions.

1.5. The net result of more than a quarter of a century of post-independence educational development was a 60-70% rate of adult illiteracy and a consequent stagnant agricultural sector; a curriculum that encouraged students to seek white collar sinecures rather than productive employment, and

a program and methods of instruction that tended to alienate the students from their communities and their cultural roots.

1.6. The PNDC Government realized that if the ERP was to succeed, the skills and attitudes of Ghanaian youth would have to be changed so that they would be prepared to become productive farmers or skilled artisans and craftsmen ready to work for their own, their community's and their country's development. It was thus decided to embark on a wide-ranging program of educational reforms, drawing inspiration from the 1974 commission's report (para.1.3), but adapting the recommendations to the current economic situation and financial realities. It was also decided, this time round, to introduce the reforms nationwide with less than a year's lead time in order to prevent vested interests from mobilizing against the reforms. This strategy recognized that it would be necessary to resolve many problems in the years following initial implementation. It is hoped that this study, by identifying some of the major difficulties in the first year of implementation of the new junior secondary school (JSS) will be immediately useful for Government.

1.7. The reforms were announced in a speech by the PNDC Secretary for Education and Culture, broadcast nationally over radio and television on October 15, 1986, and begun to be implemented on September 29, 1987 with the introduction of JSS 1 nationwide. They involve concentrating an increasing proportion of available educational resources on the nine years of basic education, which must become the right of all Ghanaians. This basic education aims to provide children with literacy skills in their own language (which will furnish the strongest base for acquisition of literacy in English), a second Ghanaian language and English; with modern farming skills; with a familiarity in using tools and a manual dexterity; with practical mathematical skills; and with positive attitudes to hard work and national development. By moving away from the past purely academic system of education it is expected that the majority of school leavers from JSS will either be able to become productive modern farmers (with extension advice and inputs), become productive skilled workers (after short training or informal apprenticeships) or to enter appropriate senior secondary level institutions.

1.8. Basic education, Grades 1-9, is to be followed by three years of senior secondary schooling (SSS) for about 30% of JSS graduates. The curriculum and texts in the new three-year SSS cycle will be completely new, again designed to draw from and relate to the Ghanaian culture and economy. All schools will have to offer courses in agriculture and other practical subjects, and Ghanaian languages in addition to other academic subjects. Annex 1-1 provides statistics on primary, middle and junior secondary, and senior secondary education.

1.9. In order to finance the reforms all unnecessary non-teaching and unqualified teaching staff are being redeployed, book-user fees are being charged to all students from Grade 3, all feeding and boarding subsidies are being removed from all levels of education, and student/teacher ratios at the higher levels are being increased. The most significant savings of all are being obtained from a restructuring of pre-university education from 6+4+5+2 years (total 17 years) to 6+3+3 years (12 years). Most of these savings are to be reinvested in basic education, with the goal of improving its quality and effectiveness, increasing intakes and enrollments faster than the rate of

growth of the school-age population, and achieving universal basic education in the foreseeable future. Already textbooks, exercise books, other teaching/learning materials, and equipment have been distributed to all (including rural) basic-level schools for the first time in a decade.

1.10. Obviously no school system can be better than its teachers, and thus significant reforms are also being undertaken in the recruitment and training of teachers. First, all unqualified teachers who have not passed at least "O" Level will be phased out of the system. Second, post middle-school teacher training is being discontinued and the new intake qualifications increased to "O" Level, and the course duration is being shortened from four to three years. Third, the content and curriculum of teacher training concentrates far more on practical ways of teaching particular subjects rather than on pure academic instruction. Fourth, constant two-four week inservice training is becoming an integral part of all teachers' professional development. Finally, it is planned to use educational radio to spread knowledge of the educational reforms and how they should be implemented.

1.11. Only a few important elements of the educational reform have been mentioned. Other integral parts involve strengthening management, monitoring and planning, as well as changing attitudes among administrators. It is clear however that the biggest educational reform in Ghana's history is underway, which if successfully implemented will equip Ghanaian youth to find productive outlets for their talents in rural and urban areas, in the formal and informal sectors, and in skilled manual and intellectual occupations. Ghana's greatest strength is her human resources. The educational reforms aim to enable these to be fully exploited for the development of the nation.

Chapter 2

Development and Employment Perspectives

Education and Development

2.1. Education contributes to economic and social development in a wide variety of ways. Until recently attempts to measure the contribution have focused largely on direct changes in productivity -- whether in farming, manufacturing or services. In the past few years, however, studies have begun to examine other effects of education. With regard to the labor market, for instance, it has been argued that education also leads to increased productivity indirectly by generating greater efficiency via rational migration and job search behavior. Further, many studies have shown that levels of fertility, child mortality and child nutrition status are closely related to parental education levels.

2.2. Education can also affect other features of individuals' lives and social development, such as the patterns and pace of social mobility and changes in the distribution of income. The expansion of education among girls and women may increase their status and power within the household and the community. Schools not only impart cognitive skills, they also convey and develop attitudes, which may be as important as any direct productivity-

enhancing skills learned. Finally, education has the potential to change people in ways that result in wider choice, increased access to information, gains in self confidence and, overall, greater control over their own lives.

2.3. While the potential benefits from education are many, they do not occur automatically. Education may make a person non-employable, intensify unequal income distribution, reduce women's household influence, encourage anti-social behavior and so on. The structure and the content of education partly determine the outcome. The benefits of the educational system are also not automatic because the system does not operate in a vacuum. The structure of the economy, economic policies followed, general societal attitudes towards learning, manual work, status, youth, women and so on, all have a substantial impact on the outcome of the educational process.

Development Perspectives

2.4. Through the 1970s the Ghanaian economy deteriorated. In 1982 per capita income was 30% below the 1970 level, import volumes were one-third below, export earnings half, and domestic and foreign investment virtually zero. The index of real monthly earnings in the formal sector fell from 315 to 62 over this period. In 1983 UNICEF estimated that 40-50% of the urban population and 63-73% of the rural population were below the poverty line.

2.5. Since 1984 the Government has initiated an on-going and broad-based program of economic policy changes, key elements of which include: very substantial currency depreciation, greatly reduced tariff levels and import restrictions, increased producer prices for export crops, public sector retrenchment, significantly increased levels of public expenditure, and strengthened government revenues and expenditure operations. During the three years of the Economic Recovery Program from 1984 to 1986, GDP grew by 6.3% a year. The Structural Adjustment Program in its first phase covering 1987 and 1988 projected growth of 4.8% a year.

2.6. In the medium term, if the policies work as anticipated there will be overall shifts in resources from traders to producers and from urban to rural areas. In the short term, gains will be felt most strongly by those involved in export crop and natural resource activities, manufactured exports and in the few efficient import substitution sectors. These gains will then have ripple effects in surrounding areas. Losses will be felt by traders (through reduced "scarcity rent" margins), the 60,000-70,000 mainly urban workers to be made redundant over a three-year period from mid-1987 in the civil service and state-owned corporations, and those laid off in private sector enterprises made unprofitable by liberalization. Again, these losses will have ripple effects in surrounding areas. Since food crops did not increase in price (until 1987 when production significantly fell) while prices of imports and inputs did, farmers -- particularly in the north -- may also have been losers. While Ghana was fortunate in not experiencing increasing inflation in the first few years of the adjustment program, the situation now is changing. Inflation rates were 10.6% in 1985, 24.6% in 1986 and around 40% in 1987.

Productive Employment Opportunities

2.7. Current labor force. The 1984 Population Census provides the most recent picture of the labor market and the distribution and characteristics of the labor force. One feature is clear -- very few people are unemployed (3.1%). With few income support systems, people have to work. Out of a total labor force of 5,422,000 around 60% are engaged in farming and fishing, 16% in production-related activities and 14% in sales and the rest in professional, administrative, service and clerical activities. Within production-related activities, the ten most common occupations are:

Food and beverage processors	-	275,000
Tailors	-	115,000
Transport operators	-	106,000
Construction workers	-	37,000
Cabinet makers	-	32,000
Machine fitters	-	30,000
Electrical fitters	-	30,000
Chemical processors	-	28,000
Plumbers, welders	-	20,000
Glass formers, potters	-	18,000
Spinners	-	17,000
Total production-related	-	887,000

2.8. Of the 887,000 workers in production-related activities fewer than 30% are formal sector employees. Over 500,000 are self-employed with no employees, 32,000 are self-employed and have employees, and 22,000 are unpaid family workers. Almost 60,000 of those employed are classified as apprentices. Additional data suggest the vast majority of these are apprenticed in the informal sector. Major occupations for apprentices are:

Tailors	-	18,000
Machinery fitters	-	16,000
Transport operators	-	8,000
Electrical fitters	-	4,000
Cabinet makers	-	4,000
Plumbers, welders	-	3,000
Construction trades	-	1,000
Blacksmiths	-	900
Total apprentices	-	59,000

2.9. The educational profile of the labor force demonstrates the low level of education and, particularly, formal training. The percentage education profiles for all economic sectors and for particular sectors are:

	No Educa- tion	Primary	Middle	Secondary	Commercial/ Technical
All sec- tors	55	8	30	3	1
Agri- culture	72	9	25	2	0.6
Production related	42	8	44	3	2

2.10. For individual production-related occupations, the highest proportions of workers with formal training are the mechanical fitters (6%), plumbers and welders (5%), and construction workers (3%). Ninety-eight percent of those working in production-related occupations have received no formal training of any type.

2.11. Future growth. The future growth in employment will be equal or very close to the growth in the available labor force. The real issue, however, is at what level of productivity and income people will be employed. This depends on the rate and pattern of economic growth (which in turn is partly determined by the skill levels and attitudes of the labor force) and the rate of increase in the labor force. The latter is likely to be close to the growth of the 15-64 year age group, i.e. 3.3% a year. With overall economic growth projected at around 5%, some productivity and income increases are possible in principle. The key issues here concern the sectors in which growth occurs, the sectoral levels of productivity, and the shares of this growth between labor and capital. If the sectors that grow fastest also demonstrate even higher levels of productivity, the result necessarily will be an absorption of the "unemployed" within the most marginal and slow-growing or stagnant segments of the agricultural, trading and servicing activities, with the possibility of further depressing income levels. This will be the case unless they have the skills and attitudes needed to earn productive incomes in the informal sector, thus further boosting growth. The most advantageous pattern of growth for productive employment expansion would be one in which demand for the products of labor-intensive activities grows even faster than substantial productivity increases.

2.12. The prospects for growth in employment in the modern wage sector are poor. Employment in the civil service and in state enterprises, which constitutes over 75% of total formal sector employment, has already been reduced dramatically (para. 2.6), and substantial further redundancies are planned. While private formal sector mining and timber industry activities have expanded and some import substitution industries such as brewing, cement and pharmaceuticals are now operating at increased rates of capacity utilization, the employment elasticities are likely to be low considering previous overmanning and the still low levels of capacity utilization.

2.13. For the next several years, virtually no leavers from the primary and junior secondary schools can expect formal sector wage or salaried employment. Employment will have to be in farming and fishing, in informal service construction, road building and production activities, or in trading. Within these categories the opportunities for productive employment with growing incomes will vary. They will also vary geographically and between

skills. To the extent possible, and in the context of the many other relevant factors, the basic education system in Ghana is required to orient its pupils to these labor market realities. This is what the new JSS system is attempting to do.

Chapter 3

Constraints on Productive Employment of School Leavers in Farm and Non-farm Informal Sector Activities

School Leavers and the Labor Market

3.1 According to the 1984 Population Census the population aged 10-14 is just over 1,500,000. This implies, roughly, that each year 300,000 young people are ready to join the labor force or continue in the education system. By 1991, approximately 200,000 of these will have had a junior secondary schooling. Just over 50,000 will enter senior secondary school. A few other education or formal training opportunities will exist for JSS leavers. However, as the number of senior secondary school leavers rapidly increases these are likely to be reduced. Depending on the labor force participation rates of school leavers, an additional 200,000-250,000 youth with junior secondary schooling and below, plus 50,000 with secondary schooling or above, will need to earn a living each year.

3.2 From the 1984 population census we can see that only 263,000 were regularly employed in the modern sector. The total number of jobs in activities that basic schooling leavers might aspire to is only twice as high as the annual number of school leavers. A labor force attrition rate of 3% a year and a 5% growth rate would provide only 30,000 jobs. Even if all these jobs were to be taken by JSS leavers, only about 15% would find regular paid employment.

3.3 It is clear then that productive employment for basic school leavers will have to be found almost entirely in the farming and non-farming informal sectors in both urban and rural areas. If leavers are absorbed in farming, production, and trading in the same proportions as exist today this implies that each year opportunities are required for around 140,000 in farming, 40,000 in productive activities, and 30,000 in trading. The rest of this chapter examines the opportunities and constraints for employment in these sectors.

The Demand for Goods and Services

3.4 While the 1987 level of cocoa output was 15% below the 1980 level, the domestic supply of food crops continues to be augmented by food aid and food imports, implying that demand in this area is strong. With respect to the output of rural non-farm activities, demand is influenced by a variety of factors, chief among which is the cash income generated directly from farming. Other determinants of demand include the levels (and net direction) of urban-rural remittances, government salaries and expenditures in rural areas, and rural expenditures on urban goods and services. Another source of demand for

rural-nonfarm output is Government development programs, mainly infrastructural, which both generate demand directly and also indirectly through wage payments. Community-based small-scale infrastructure activities are likely to have significant multiple effects in the immediate area. Finally, to the extent that rural areas do not currently provide the goods and services required by the rural population, income leakages to the urban areas or to imports will result. It is recommended that the data being generated by the Ghana Living Standards Survey (GLSS) are used to analyze rural expenditures to provide a base for special programs and investments aimed at stimulating output growth in the rural areas.

3.5 Determinants of demand for urban informal employment include total urban income, government developmental expenditures, formal sector growth and the demand for imports. Again, until the GLSS data are analyzed the implications of this for, as an example, wage policy will not be known. In general, international evidence tends to suggest that the more equally income is distributed the greater the demand for informal sector work.

3.6 In the absence of comprehensive data regarding the level of demand for informal sector activities, reliance has to be placed on very partial evidence. "Masters" in blacksmithing, welding, fitting, carpentry, tin plating, cane, metal and auto-mechanical trades told the team that the demand for their goods and services is buoyant. Those in cane and carpentry largely produced to orders while those making simple goods from metal stated that everything produced was easily sold. Representatives of the National Association of Garages also indicated that demand for their members' services was very high. In none of the trades reviewed was there concern that the many people apprenticed would eventually provide too much competition given the size of the market, even in instances where at least five apprentices were working with one master. In any case, it was argued, any over-production of tradesmen would lead to their removal to rural areas. One of the strong messages from the interviews was that many of the apprentices were from rural areas and had migrated specifically for the training.

3.7 A second indication of high demand for informal sector workers with skills is the level of daily rates received, particularly in the construction trades. Compared to ₵146 daily minimum wage in the public service (₵286 including benefits) and the equivalent of ₵650 a day (₵15,000 a month) earned by senior civil servants, moderately-skilled carpenters and masons appear to earn quite easily up to ₵1,000 a day. Discussions with contractors suggested that even at these rates there are shortages, particularly in the smaller towns.

3.8 A review of the changing patterns in the location of the labor force will help to indicate where any new initiatives need to be focused and demonstrate that school leavers are often very well aware of economic realities. According to the 1984 Census, 62% of the population live in the locality in which they were born. The percentages are similar for rural and urban localities. Percentages of residents in urban areas who were born there vary by age group -- 50% of 20-24 year olds, 43% of 25-29 year olds, 38% of 30-34 year olds. This suggests a slowing down of rural-urban migration. Initial tabulations from the recent GLS survey support this conclusion. In Ghana, the pattern of rural-urban migration is both directly rural-urban and

also rural-small town-large town. For each age group, the combined percentage that has moved in these two ways is:

<u>Age</u>						
<u><20</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40-44</u>	<u>45-49</u>
15.3	25.6	28.4	29.4	32.4	32.5	36.5

Thereafter the percentages fall. Education is (or has been) a major determinant of migration. The percentages of graduates of each level of education who have migrated rural-urban or urban-urban are directly related to level of education:

<u>< Primary 6</u>	<u>Primary 6</u>	<u>Middle 4</u>	<u>Secondary 3</u>	<u>Secondary 5</u>
15.5	23.6	34.8	45.8	57.7

While one-third of all middle-school leavers have migrated, around half of all secondary school graduates have done so. Anecdotal evidence suggests that almost all movements to the towns today are for specific purposes such as apprenticeship or a response to a particular development project.

Obstacles to Productive Employment

3.9 The obstacles to school leavers responding to demand and being productively employed in the farm and non-farm informal sector operate at two levels: those that constrain school leavers (and others coming out of training institutions) from becoming self-employed and those that constrain workers already in these sectors from expanding and employing (in one way or another) additional labor. In the discussion below, both aspects are treated under common headings. These are: credit, work acquisition and marketing, skills and technology, raw materials, laws and macroeconomic policy.

3.10 Credit. A major constraint to becoming self-employed and to expanding existing informal sector activities, thereby expanding employment and/or apprenticeships, is said by those involved to be lack of capital and credit. In farming cash is required to purchase tools, seeds, fertilizers, livestock, fencing, and feed. In the non-farm informal sector, a set of tools and some materials are the major initial requirements. The team was told by both training institution instructors and master craftsmen that for carpentry, a set of tools and a workbench would cost around ₵40,000. To become part of a garage co-operative, the Ghana National Association of Garages estimates a cost of ₵150,000-200,000. Credit from the formal banking system is not available for these purposes. With low liquidity in the system, banks have preferred to make simple large loans based on substantial collateral, available over short periods of time. These criteria have favored trading rather than production. None of the self-employed interviewed by the team had received bank loans.

3.11 For those attempting to enter farming on their own, the only sources of finance are family, friends, and such activities as vegetable growing and small-scale marketing. As Government works to reform and expand the rural banking system, it will be important to address the issue of support to the young initiate as well as the established farmer. In most cases,

community-based banks should have sufficient moral suasion to ensure small loans are recovered. Alternative sources such as the informal "revolving" credit groups are only available to those already earning regular income. In the informal sector, those completing apprenticeships have often acquired tools along the way or are able to earn the cash required by remaining with the master as a journeyman for some time. Greater problems are found by those completing more formal training courses. In some of these, aid funds have been used to purchase tool kits and in others the intention is to set aside some of the income earned from outside contracts (see Chapter 9).

3.12 In several interviews craftsmen said that they would take on more apprentices if they had capital to expand. Currently Government efforts to encourage banks to lend more to small-scale industry concentrate on the larger of these enterprises and those proposed by redundant civil servants. Appropriate methods of making loans available to large numbers of self-employed still need to be designed, including the formation of neighborhood trades organizations that could negotiate community-guaranteed loans from financial intermediaries.

3.13 Work acquisition and marketing. Problems in acquiring the first few contracts after becoming self-employed affect non-farm informal sector workers, and those coming out of training programs in particular. Tradesmen completing apprenticeships may bring past customers with them or, at least, are likely to have some knowledge of where to look for work. They will also have had three-five years of practical experience. Graduates of training programs require some support. In the present situation this can be most realistically provided by the peer group.

3.14 Skill levels and technology. Informal apprenticeship training, which represents the vast majority of all training in Ghana, involves no theory but much repetitious practice of a limited number of processes over, often, a long period of time. The system is effective at what it does, but this is limited. Skill quality is often low and apprentices can be no more skilled than their masters. Government support to upgrade the skills of the masters should be strengthened. Where tradesmen are geographically concentrated, short courses can be organized. Where tradesmen are scattered, however, as in rural areas, mobile training squads might be appropriate. The timing of all up-grading courses needs to be based on an examination of the work rhythms of the particular trade and structure. In addition to skills upgrading, consideration should be given to holding similar courses in simple business methods. These are slowly being incorporated into some of the existing training courses but not yet into the majority of government-sponsored training. Such courses should build upon rudimentary accounting, farm budgeting and materials costing skills taught in the JSS.

3.15 Whether employment, productivity, and incomes increase simultaneously in farming and in the non-farm informal sector depends partly on what happens in basic education, and partly on whether improved labor-intensive technologies are developed and adopted. For farming, the Global 2,000 program and the proposed Agricultural Extension Rehabilitation Project are aimed at improving the delivery system of technological packages to the small farmer and generally improving the extension services. The nearest equivalent to this for the non-farm informal sector is GRATIS (Ghana Regional

Appropriate Technology Industrial Service) which currently operates Intermediate Technology Transfer Units in Tema, Kumasi, and Tamale. These units are located in light industrial areas and aim to demonstrate and establish new technologies and provide advice, information, and training.

3.16 Raw materials. In discussions with self-employed workers the team was told repeatedly that an important constraint to expansion is lack of raw materials. Metal trades depend heavily on scrap and much time is spent locating sources. Raw materials account for a large share of total costs in many activities and scarcity-induced price rises could seriously affect final incomes. However, it is wood and wood products that are particularly important in the informal sector. As a fuel and a raw material it has been estimated that wood affects three-quarters of all small-scale enterprises.

3.17 Laws. The legal environment often discriminates against the self-employed and small-scale enterprises by restricting the types of activities that can be followed in a particular locality. Recent moves by the Accra City Transport and Sanitation Committee to disperse food sellers and fitters from their low-rent or even rent-free roadside locations are a prime example. As access to customers is essential for the viability of certain informal sector activities, such efforts to draw informal sector craftsmen away from their clientele must be reversed. It is recommended that local consultants systematically identify any aspects of the nation's legal system (including by-laws) that discriminate against or unduly restrict the activities of the informal sector.

3.18 Macroeconomic policy. Several macroeconomic policies directly affect the extent to which farming and informal sector activities can expand. It would be useful to pose the following questions of current policy in the context of future economic work: (1) In current growth projections, industrial activities such as manufacturing and utilities are expected to demonstrate the most rapid expansion, much of which is expected to be located in the formal sector. How will modern organized sector growth affect informal sector growth? (2) How will proposed changes in wage structure affect the total composition of demand for food, domestic non-food output, and imports? (3) How do food aid and the liberalization of food imports affect farming incomes and what impact do they have on demand for non-farm informal sector output? (4) How have reduced restrictions on imports such as second-hand and sub-standard clothing affected demand for informal sector textiles? and (5) What will be the effect of reduced fertilizer and petroleum subsidies on the formal, informal and farming sectors' ability to increase income and expand?

Chapter 4

Skill Characteristics Required for Productive Informal Sector Employment and the Role of Basic Education

4.1 For the self-employed in farming and in the rural and urban informal sector, a variety of skills is required. At one end of the skill spectrum there are occupation-specific skills. For example, in poultry production these include handling, recognizing birds in lay, debeaking,

diagnosing coccidiosis; in vegetable growing they include planting, transplanting, recognizing and treating diseases and pests; in blacksmithing it is essential to be able to shape, cut, weld, and twist; in tailoring one must be able to mark out, cut, and sew. Further along the spectrum skills are more general and are common across several occupations. These include making and working from drawings, assessing input requirements, measuring, using tools, costing and accounting, making numerical calculations and reading instructions. At the far end of the spectrum are those skills associated with conceptualizing alternative and efficient approaches to a particular production problem, applying a coherent set of principles to new situations, and following an analytical approach. Several of these types of skills require some theoretical base from which to generalize, plus the ability to acquire additional knowledge and information.

4.2 Most of these skills can, in principle, be learned through formal, pre-employment schooling. In practice, however, resource constraints within schools require that choices be made regarding which types of skills can best be provided in schools and which are more effectively learned outside of basic schooling. Preparation for skills in four basic categories is discussed below with regard to farming and non-farming informal sector activities.

Manual Dexterity

4.3 With regard to manual dexterity, it is important to stress that the "vocational" subjects (including agriculture) taught in the JSS are meant to be introductory or pre-vocational. It is not expected that graduating pupils will be fully able to conduct a particular type of farming or be readily employable as a carpenter or mason. The intention is to make them aware of the possibilities of earning a reasonable living and introducing them to the type of skills, including manual ones, that are involved. An attempt is being made to break down any psychological barriers to manual work that might exist. For example, it is anticipated that by identifying and handling appropriate tools for specific purposes pupils will become more aware of the type of work involved in manual occupations, develop increased respect for them, and recognize the skill involved in manual work.

4.4 Although the manual subjects are only pre-vocational, if well-taught they could reduce substantially the period of apprenticeship required for many trades and, in farming, reduce the time required to find information about activities such as the growing of vegetables and other cash crops and the rearing of animals. But this will require that the manual subjects taught in JSS not be interpreted as drudgery, but rather as a set of activities that are worthwhile and give pride to the executor. Analyses of the content of indigenous apprenticeships in East and West Africa illustrate the areas in which the process could be speeded up through effective pre-vocational studies. The core activities identified are: identification and use of tools; cutting of raw materials; measurement and marking of specifications; shaping of raw materials; and joining parts and finishing off.

Literacy and Numeracy

4.5 The fundamental pedagogic role of basic schooling is generally seen as the development of literacy and numeracy, which are important skills

for a wide range of activities both within and outside of employment. They give access to the large body of nonverbally-transferred information and are important in dealing with various types of external authority. For developing and operating business activities -- such as buying inputs, using manuals, costing work activities, determining prices, making marketing agreements, signing contracts -- these skills are essential. In the interviews with informal sector masters referred to in Chapter 3, the team was told that although most are willing to apprentice the unschooled, they have a strong preference for middle-school leavers. This was said to be due to school leavers' greater ability to make and read drawings and, in general, learn more quickly. Whereas some activities can be replicated following standard procedures, the ability to read, write and make numerical calculations will often be needed to discover and implement new and more effective activities.

4.6 Currently the quality of basic schooling appears to vary greatly across the country. Random visits to schools in the North found very low literacy achievement. Results of a recent survey testing reading, writing, and numerical abilities also suggest that only about a third of those with a primary schooling can effectively read or write. It is not until after two years of middle school that the majority of children can read. The ability to do written calculations appears more widespread. The implications of these results are very disturbing for primary schooling. By the end of middle school, however, almost all graduates are literate and numerate and apparently have been able to maintain these levels. Annex 4-1 summarizes the results.

4.7 With the number of periods devoted to practical subjects increasing up to almost half the total, the effect on literacy and numeracy will need to be monitored carefully. However, it should be remembered that the increased emphasis on pre-vocational subjects need not mean less attention to literacy and numeracy. Much depends on how the subjects are taught. In addition, it is in the primary schools where the main literacy and numeracy teaching problems exist. After six years of full-time schooling many more than 30% should have these abilities.

Simple Business Skills

4.8 Literacy and numeracy are pre-requisite for the third type of skill needed by the self employed -- simple business skills, including knowledge of and how to gain access to existing support systems and institutions. In interviews with tradesmen, few appeared to be operating even simple sets of accounts, and systems of costing and pricing seemed to be ad hoc. For instance, one of the more organized of the cabinet makers the team spoke with determines the price of an article on the basis of the price of the last one sold; for new articles he looks at prices in other workshops. Questions regarding constraints to expansion elicited much confusion. For example, the relationships between more space, additional rent, extra apprentices, and increased output were not being thought through. Information on sources of credit, in particular, and all potential sources of support in general (training, technology, marketing, etc.) was found to be lacking.

4.9 Until recently various vocational training programs have not included the teaching of business skills, although this is beginning to change (see Chapter 9). But the teaching of these skills needs to begin earlier in

JSS. At that level business skills need not be taught as an additional subject, but as part of the practical subjects, mathematics, English, and life skills. As the number of formal sector jobs for JSS leavers diminishes and self-employment or employment in small-scale informal sector enterprises becomes the norm, it will be all the more necessary for schools to prepare students in the widest sense for this reality. Knowing where and how to look for information on a variety of subjects is critical for the self-employed who aim for something beyond basic, low-technology and low-income production.

Relating Theory to Practice

4.10 In most parts of the world schools are associated with the teaching of theory, and the workplace with practice. There is often little continuity between the two. In a survey of apprentices in Uganda, while all those with formal schooling had learned to measure in school, over half had never marked a measurement on wood or metal. This implies that the theory of measurement had been taught with little application to life outside the school. The introduction of pre-vocational subjects in JSS will not necessarily alter such a situation. Much depends on how these subjects are taught, how much time is allocated to the classroom and how much to the workshop, and how much workshop practice is related back to classroom theory.

4.11 With regard to the quality of practical periods, much will depend on the teachers, the availability of raw materials, and the tools. In this context it is important that the status and purpose of hands-on practical work on the farm, in the garden, and in the workshop are clarified. In particular, the commercial and pedagogic purposes need to be differentiated. In some instances they will overlap but in others they may conflict. If the integration of vocational subjects into the JSS curriculum is to be successful, the manual aspects must not simply be repetitive drudgery. While commercial considerations need to be taken into account, there is a need to ensure that through the production of a given output, a wide and increasingly complex set of basic skills is learned. The effective teaching of the technical and vocational subjects will be central to the success of the education reforms. Monitoring of the experiences should be made systematic.

Chapter 5

Attitudes of Ghanaians to Education, Development, and Employment

Attitudes to Education

5.1 Historically, Ghanaians have had very positive attitudes to education. For many years formal, academic education was seen by Ghanaian parents as the way for their children to "better themselves," as the route to wage employment in the cities and towns. This attitude was valid during the end of the colonial period and first decade after independence, since anyone with a school-leaving certificate (first from primary school, then later from middle school) was nearly guaranteed a secure job in the public service or private wage sector of the economy. The high value that Ghanaian parents placed on education was reflected in their willingness to make financial

sacrifices to insure that their children received an education. Parents were prepared to contribute cash and labor to the construction and repair of primary school buildings, as well as to pay for such items as school uniforms, textbooks, and -- in some cases -- school fees. It is estimated that between 1975 and 1980 private expenditure accounted for 53% of total national spending on education in Ghana, most of which was spent on primary education.

5.2 In recent years, however, the link between academic education and a secure financial future in formal sector employment has broken down. As the number of Ghanaians with school-leaving certificates has expanded and the recent economic decline has led to a slower rate of growth in the number of formal sector jobs, growing numbers of rural school-leavers have returned from their job search in the towns empty-handed. As a result, the value of traditional, academic education has been called into question. Some basic statistics support this conclusion. While primary school enrollments grew steadily until 1981/82, they fell by nearly 100,000 in 1982/83 and essentially remained constant until 1986/87 when they once again began to increase. The average annual growth rate in primary enrollments between 1980/81 and 1987/88 was only 1.59%, well below the 3% rate of school-age population growth. Even with the past year's increase to 1,535,505, total primary enrollments have not yet regained their 1981/82 level (see Annex 5-1). Data on the rising rate of drop-out are also alarming; in some schools the rate of dropout from P1 is as high as 71%, and high rates persist in subsequent years, especially in the north. These figures suggest that parents have (correctly) begun to place a lower value on academic education that does not prepare youth to support themselves and their families.

Attitudes to Agricultural and Self-Employment in Rural Areas

5.3 With the deteriorating prospects for urban wage employment, most parents interviewed by the team seem to have developed appropriate expectations about what education for the majority of youth is for -- that is, preparation for eventual self-employment in the rural areas. These attitudes vary by region, appearing to be more realistic in the southeast, and to some extent in the southwest, than in the north of the country.

5.4 The study team was told by several JSS headmasters that whereas parents used to "overvalue" academic education, they are now more realistic and prefer that their children grow up to become farmers or self-employed craftsmen in the area from which they come. They also mentioned their desire for youth to be able to support themselves close to home so that families can remain together. Given this attitude, it is not surprising that the team found a high level of community support for the practical orientation of the new JSS curriculum.

5.5 Community support was found to be high in the south-eastern part of the country, where parents in all villages visited were engaged in activities to construct new workshop facilities or renovate existing classrooms for use as workshops. Parents are not only making direct cash contributions (ranging from ₵200 to ₵1000 per adult male, and from ₵100 to ₵800 per adult female) in most communities, but also participate in special fund-raising events, donate tools and materials for technical and vocational activities, and provide labor. Contributions of up to ₵5,000 are also being

sought by some villages from compatriots who are working in the towns. In one school visited in Eastern Region, the chief has taken responsibility for organizing all community support activities, with assistance from the local CDR chairman to oversee the construction work. Similar support is being demonstrated throughout Eastern, Volta and Ashanti regions. Community leaders are not only committed to the new basic education program, but also clearly understand its purpose. The team found support for the goal of providing youth with basic skills training to better prepare them for rural farm and non-farm informal sector and self-employment.

5.6 Strong support for JSS was also voiced by the rural and small town craftsmen in these regions, who are well-informed about the objectives of the reform. They believe that the new education program will provide a good introduction to the use of tools and they look forward to taking on future JSS graduates as apprentices in their workshops. Although some of the masters are willing to accept school drop-outs as apprentices, they all said they prefer apprentices who can read, measure, and do simple mathematical calculations. Many said that they would be willing to open their workshops to groups of JSS students or go to the local school to help teach their particular skill.

5.7 Reports from the field indicate that the level of community support for JSS is somewhat lower in the Central and Western regions. While many community members favor an educational program that they believe will help to prepare their children for local jobs, others pointed to a number of weaknesses such as the hurried implementation schedule and shortage of technical teachers. Although people in this part of the country are engaged in construction of JSS workshops, they seem less ready to embrace JSS fully before they see some results.

5.8 It was in the northern part of the country, however, where the least commitment and effort were found. This is likely due to a combination of factors. First, historically education in the north has been relatively underdeveloped in comparison with the rest of the country. Second, up until quite recently education was completely free in the northern half of the country. Third, in northern areas many parents are afraid that the teacher will proselytize. Fourth, it is in the north where there is the greatest reliance on subsistence agriculture and thus where the opportunity costs of education are the highest. This problem has been compounded by the fact that academic timetables have not been geared to agricultural seasons.

Attitudes of Students

5.9 Student attitudes toward education and career expectations also vary by region. In the eastern part of the country it appears that students are responding quite positively to JSS. They seem to have realistic career expectations and positive attitudes to farming and self-employment in their villages or nearby small towns. According to teachers, JSS students demonstrate a higher level of interest in agricultural science and school farm activities than did former middle-school students. Where students have been allocated individual plots of land to farm, it is common for them to spend time working on them after school hours and on weekends.

5.10 In Central and Western regions student attitudes were more mixed. Informal surveys conducted by the team reveal that over 56% of the boys and 80% of the girls would like a formal sector job when they leave school. Most boys said they would like to become a teacher (25%), doctor (18%), or engineer (16%), while only 5% indicated that they would like to become farmers and 3% carpenters. When asked what they expected to do (rather than what they would like to do), 22% listed farming, 17% carpentry, and 9% teaching. Similarly among the girls, the overwhelming majority would prefer to become professional wage earners. Highest preferences were expressed for teaching (37%) and nursing (35%); 8% said they would like to become doctors. But when questioned about what they expected to do, the girls also demonstrated quite realistic views about likely employment possibilities: seamstress (31%), farmer (25%), hair dresser (21%). (See Annex 5-2.)

5.11 In the north, students' attitudes varied widely from one school to another, possibly reflecting the attitudes and skills of the teachers responsible for technical and vocational/life skills. Nearly all the students in seven of the JSS visited expressed interest in obtaining regular modern sector jobs, including several who said that they "wanted to go to West Germany" (presumably to make money) as their career goal. Yet in the other six schools visited in this region, student views were markedly different, reflecting very positive attitudes to farming, carpentry, and other appropriate skills and crafts.

Attitudes of Teachers

5.12 Teachers generally support the idea of preparing pupils for self-employment, as most of them are acutely aware of the slim chances their students will have to pursue further formal education or to find wage employment. Thus most teachers see JSS as an improvement over the academic emphasis of the middle schools, and very much like the new practical orientation. Many seem pleased to be part of a new initiative that is attracting a lot of attention and community support, as well as creating a positive new atmosphere in the school. A small number, however, view JSS as no different from the old middle continuation schools.

5.13 Despite the relatively positive attitudes expressed by teachers and a high degree of motivation to make the reform work and thereby help students to become productive adults, teachers expressed serious concern on two points. First, they are worried that the level of English of most students is so low that they will not be able to benefit from the curriculum. In response, teachers in some schools have begun to provide informal remedial English classes for students in greatest need of tutoring. Second, there is considerable concern that there will not be an adequate number of trained technical teachers or workshop facilities to implement the program as planned. Without these inputs there is the risk that schools will revert to old ways of teaching, thereby undermining implementation of the reform program.

PART II
BASIC FORMAL EDUCATION FOR DEVELOPMENT

Chapter 6

The Impact and Effectiveness of Basic Education

Concerns about Quality

6.1 **Past experience.** For many years the majority of Government primary schools have been offering a very poor education. Despite the fact the almost 70% of Ghanaian children are enrolled in school, adult literacy rates remain stagnant at around 60-70%. This suggests that attendance in school is not resulting in permanent literacy for the majority of students. A further indication of the low level of effectiveness of Government primary education has been the rapid spread of private preparatory (primary) schools over the past ten years.

6.2 School hours and school terms have officially been very short, and in practice even shorter. In many respects the school has been seen by unscrupulous administrators as a way of placing relatives or friends in salaried employment, even when the prospective teacher is semi-literate himself, and his post is not justified according to student numbers. Until very recently the few primary textbooks that have been available have tended to stay in warehouses, or at best in urban schools. Exercise books were unaffordable or unavailable, while slates, chalk and other teaching materials could not be found. The job of circuit officer (inspector) has generally been considered a sinecure, offered as a reward to long serving teachers with no precise job description or clear duties.

6.3 Teachers would only turn up to school when it suited them, and consequently student attendance was generally low, and dropout rates high. Teachers would often demand that students work on their farms, which led parents to withdraw their children from school. Often there were several schools belonging to different religious denominations in the same village, each overstaffed and underenrolled. By the early 1980s community support for education had sunk to a very low level, and even the most rudimentary repairs to school buildings were not being made. The school and its compound, instead of being a visually stimulating environment, became an eye sore, and an example of what should not be done.

6.4 It is only over the past two or three years that Government has been making a concerted effort to improve significantly the quality of primary education throughout the country. It is thus not surprising that the study team remarked on the low level of English ability of JSS 1 students in all the southern areas of the country. With the availability of primary textbooks, and the upgrading of the teaching force the situation is likely to improve rapidly. What is surprising however is the fact that in many of the more remote areas, especially in the northern half of the country, the large majority (often more than 80%) of children completing grade 6, or even JSS 1, were completely illiterate, not even able to decipher a simple word such as BAD. There can be no excuse for such a low level of achievement, and no point

in squandering the nation's resources on paying teachers who make no effort at all to educate the children in their charge. The new JSS, SSS and other elements of the reformed system can be no stronger than their common foundation, the primary school, upon which development of the economy and the society ultimately depend.

6.5 It is therefore recommended that with immediate effect the Government implement a policy to ensure that schools do in fact perform an educational function. One strategy Government might consider would entail notifying headmasters and teachers at the end of the 1988/89 academic year that from the end of the 1989/90 academic year a simple standardized achievement test will be administered annually to all P6 students in reading, writing, and arithmetic. This test would not be designed to affect the progression of students to JSS, but to evaluate the effectiveness of teaching in the schools. Results of the tests would be published and broadcast across the country so that communities would know just how well their local schools were doing at educating their children. Schools that do well could receive awards or public attestations. But any school that does not produce an average score above a specified level of achievement would be warned that government aid would be withdrawn if the school's average score did not improve sufficiently within two years. If after the third year the average score remained below the minimum acceptable level, government aid would be withdrawn from the school. In order to avoid penalizing schools in geographically disfavored areas (where it is particularly hard to attract and retain good teachers), it would be possible to set different minimum levels of achievement for different regions of the country.

6.6 Such a scheme would give communities essential information about the performance of their schools, so that if they are dissatisfied with their school's performance they will be able to demand accountability from the local teaching staff. This scheme would also put an end to the current situation that allows schools to receive government assistance despite the fact that they are teaching children nothing. Without a minimum degree of responsibility on the part of teachers, no reform can even begin to be effective. Rewards (such as special bonuses) might be given to teachers in those schools that show the largest increase in pupil achievement from one year to the next. Certainly, however, rewards and punishment must be rapidly introduced to ensure that basic education teachers work hard to create the strong foundation needed for further educational and developmental progress.

6.7 The teacher is the heart of any education program. Although all JSS teachers and primary school headmasters had a short orientation to the objectives and curriculum of the new system, none had training in how to teach the new curriculum, particularly the new practical agricultural, pre-vocational, and pre-technical curricula. It was strongly felt that all basic teachers should be provided with continuous short inservice training over the next few years, with promotion and increments dependent on their attendance (see Chapter 8).

6.8 In order to ensure dramatic increases in basic education effectiveness and implementation of the reforms, constant attention will have to be paid to supporting, encouraging and assisting teachers through the preparation and distribution of teachers guides for all major subjects;

through the preparation and distribution of a bimonthly newspaper for basic-level teachers to help improve their performance, publicize success stories, and propose solutions to common problems; through increasing the frequency and effectiveness of inspection (see Chapter 8); and through a new revamped school broadcasting service (see Chapter 11).

6.9 Community role. It is also essential that the community is made fully aware of its responsibilities for the implementation of JSS. Currently communities are devoting a great deal of effort to the construction of JSS workshops. Their responsibilities are much greater than this. They should also be providing the recurring materials needed for pretechnical teaching (wood, scrap metal) and for pre-vocational teaching (straw, calabashes, etc). They should arrange, at no charge to government, for local craftsmen and artisans to visit the school, and provide an orientation in their particular craft, as well as having groups of students work with them from time to time. They should also arrange to supervise their school and check that the teachers are turning up on time and carrying out their tasks diligently. Finally, they should help ensure that the classroom and compounds become attractive and stimulating environments. In order to clarify for communities their functions and to further mobilize their support it is proposed that a special well-designed and profusely-illustrated booklet "This is Your School" be produced and distributed to chiefs, CDRs, PTAs and all other groups who might be involved in mobilizing continuous support.

6.10 Curriculum and testing. In any educational process it is not only the intended curriculum that is important, but also the unintended hidden messages. At the JSS level the textbooks seem to be well-prepared and carry messages consistent with the objectives of the reform. The timetable, however, does carry an anti-practical bias, with the practical work often being concentrated at the end of the day or even outside the normal timetable. The lack of a textbook for Ghanaian languages carries the hidden message that these are less important than English and other subjects. At the primary level less attention has been paid to avoiding an urban, middle-class, modern-sector bias in the textbooks.

6.11 Pedagogically there are far too many subjects taught in any one year at the JSS level. There is no way a student can absorb 12 or 13 different subjects at a time. It is therefore recommended that with immediate effect French be dropped, particularly since hardly any school has a teacher capable of teaching French. It is also recommended that technical drawing either be dropped or incorporated as a minor component of the maths curriculum. Further, of the remaining 11 subjects, only nine should be taught in any one year. For example, in JSS 1, vocational and life skills would be taught; in JSS 2, vocational skills and technical skills, and in JSS 3, technical skills and life skills. A similar alternating pattern could be established with social studies, cultural studies, and physical education. All the other subjects could be taught for each of the three years.

6.12 The maths textbook was found by many students and teachers to be much harder and of a higher level than the other texts. It is thus suggested that it should be considerably revised. This revision could incorporate some essential elements of technical drawing. It is also suggested that some simple business management, costing, and marketing should be included as an

integral part of the prevocational and pretechnical subjects to better prepare students for eventual self employment. In order to evaluate the appropriateness of the new curriculum and materials the Curriculum Research and Development Division (CRDD) should identify a sample of schools for continuous and intensive evaluation.

6.13 According to the reform proposals students' progress will be evaluated partly on the basis of continuous assessment (40%), and partly on the basis of external assessment (60%) by the West African Examinations Council. It is extremely important that teachers are informed of the criteria of continuous assessment so that the assessment can start with the 1988/89 academic year. What is even more important, however, is that in the external assessment very considerable weight is given to practical ability and competence. If only paper and pencil examinations are given then teachers will soon stop teaching the practical subjects and teach only those subjects that will be examined. It is strongly recommended that at least half the weight in the Junior Secondary Leaving Certificate Examination be given to an assessment of practical work if JSS is to be able to fulfill its objectives of imparting pre-vocational, pre-technical and agricultural skills.

Overstaffing

6.14 The basic education system seems to be both underfinanced and overfinanced. Serious overstaffing exists with, for example, four teachers found at most JSS, when the established norm was only three teachers. It was also found that staff in excess of the quotas had been allocated to schools by assistant directors with absolutely no justification. For instance, a school was visited with only 13 students but for which four teachers had already been appointed. Some JSS were found with enrollments of only ten students, and the likelihood of an even lower intake in 1988/89. In the annual fine-tuning of JSS such schools should be immediately closed. Further, the experimental JSS are still severely overstaffed, with some schools having as many as 29 teachers for nine classes. Staff could easily be transferred from those schools to the less well-endowed.

6.15 The team also noted that in many cases NSS staff were appointed to schools in addition to the normal quota of teachers. One JSS visited with two classes had five regular teachers and three National Service personnel. Such a policy is entirely counterproductive to the whole philosophy behind the National Service; instead of learning how to work hard, the service personnel learn habits of underwork and poor discipline.

6.16 Many urban primary schools and continuation schools employ "sewing teachers" in large numbers who appear to do no sewing and sometimes teach as little as two hours a week. In addition, many of these schools employ large numbers of almost non-existent non-teaching staff. For example, one small ex-continuation school was found still to employ two farm laborers and a farm manager (none of whom could be seen) and two night watchmen.

Duplication of Facilities

6.17 Equally serious is the phenomenon, especially in the southern half of the country, of the existence of two or more schools in a village, often

within a few meters of each other, belonging to different denominations yet financed almost entirely by Government. This results in duplication of teachers, equipment, gardens, and workshops. This most unsatisfactory utilization of scarce resources could be readily improved if the respective churches were to cooperate closely on the development of facilities, which should eventually lead to some level of merging, with the resultant schools being larger, better-equipped, better-staffed and more effectively-supervised. The church education units often realize this and in some instances they are already beginning to cooperate with each other.

6.18 The results of the school mapping exercise can provide the basis for the necessary analysis of this problem and should be used to identify districts or sub-districts where particular denominations predominate in order to allocate responsibility for different areas to different churches. One possibility might be to allow any denomination to run the first three grades of primary school in any village but then give responsibility for higher levels to one denomination in a particular village. Once Government, with the aid of National Service personnel, has collected this background data and developed policy suggestions, a national conference of all church educational authorities should be held to discuss this problem. Government ultimately has responsibility to work out ways to ensure that the scarce resources it has available, particularly those needed to implement the skill training elements of JSS, are effectively utilized.

6.19 Extrapolating on the partial evidence gained by the team it would seem that with the overstaffing at JSS, the old middle continuation schools, and urban primary schools, plus the unjustifiably small JSS and the excess staff needed to run denominational schools, it should be possible to reduce the employment of unqualified pupil teachers by around 20,000 with no adverse impact on quality or coverage of basic education. If these resources could be reinvested in basic education and its support services a real breakthrough in quality and effectiveness could be achieved.

School Calendar and Timetable

6.20 Although there is no direct correlation between time spent in school and pupil achievement, actual schooling hours are very low in Ghana, even with the recent increase in the school year to 40 weeks. Officially at the JSS level there are eight thirty-five minute periods a day, five days a week -- a total of only 23 hours. At the primary level the day is shorter by two periods, a total of only 17.5 hours a week. Actual teaching time is often less, as teachers arrive late, and schools seem to be closed for the slightest excuse, because of rain, local festivals, funerals, market days and so on. It is recommended that at least one more period a day be added to both primary and JS schools; and that any school that closes for more than 20 days a year for unauthorized purposes will have to make this up from the school holidays.

6.21 There are extraordinarily high rates of dropout in primary schools, as high as 71% of P1 students from some schools, and quite high rates in subsequent grades especially in the northern part of the country. Obviously those dropouts are largely due to the poor level of instruction offered -- why should a parent continue to send his children to school when they are learning nothing? Dropout is also partly caused by an inappropriate

timing of the long vacation in the northern region, and inflexible school hours. The long vacation has recently been changed so that it coincides with the peak planting season in the south of the country, but in the north it takes place at a period when the demand for farm labor is at its lowest. It is thus necessary to have a different long vacation in the north of the country. In addition there is nothing sacrosanct about opening school at 8 a.m. everyday, or not having school on Saturdays. The times and days of operation of particular schools should be fixed to take account of the work schedule of children in the locality, and of local customs. The local district Assistant Director of GES should have the authority to accept alternative days or times of operation, as long as the requisite number of periods a day and days a week are taught, and as long as this is done in writing, and posted on a public notice board at the district office.

Critical Issues

6.22 Certainly the effectiveness of basic education can be improved if all teachers receive short inservice training each year over the next few years, if teacher guides are distributed, if a regular newspaper is produced, and the frequency of inspection increased. However only limited progress will take place if teachers and other personnel are not made accountable for their performance. For this to happen it is necessary to break away from the system where salary is a right whether a teacher helps the children in his school learn or not, whether a circuit officer visits schools or not, and whether assistant directors of education implement Government staffing norms and other policies or not. At least part of the salary -- say the 15% teachers allowance - should only be paid on the basis of results.

6.23 Finally, it is emphasized that every effort -- inservice training, examinations, community pressures, and accountability -- will have to be made to ensure that the students in JSS get hands-on experience with prevocational, pretechnical, life skills, and agriculture tools. It is this hands-on experience far more than any theory that will eventually enable JSS leavers to be more productive than middle-school leavers were in the past.

Chapter 7

The School System and Agricultural Development

7.1 Given the fact that 60% of the labor force is currently involved in farming, it is certain that a significant proportion of school leavers will earn their living from agriculture in the coming years. And since there is at present no network of skill training to prepare Ghanaian youth to become productive farmers, such training will have to be provided through the school system. It is for this reason that a considerably increased emphasis on agriculture at both the primary and junior secondary levels is one of the main goals of the whole educational reform.

7.2 However, while it is one thing to announce a goal, it is quite another to put it into practice. If school-based agricultural programs are to be successful they must be built up around clear objectives. In line with the

broader goals of the JSS curriculum, the objective of teaching agricultural science at the JSS is to develop positive attitudes to farming and the practical skills that go along with those attitudes.

7.3 . In support of this objective, the distinction between imparting attitudes and skills as opposed to operating a profitable school farm needs to be drawn. Whereas school farms that emphasize learning can engage in a variety of experimental activities (regardless of economic risk, as long as there is observational reward) and minimize repetitive, laborious activities (even if profitable), school farms that try to maximize income will, necessarily, undertake only a few profitable activities with a short-run payoff, and will need to take advantage of cheap and captive student labor. Although it might be possible for a school farm to generate some income, or even profit, the pursuit of financial gain must be secondary to the primary objective of training productive farmers for Ghana's future.

7.4 In order to support the successful implementation of the JSS agricultural program, several crucial improvements should be undertaken. First, the team felt that the subject title of JSS "agricultural science" carries a hidden message or connotation not intended by Government. Agricultural science suggests an academic discipline rather than the development of positive attitudes and practical skills. It is thus recommended that the title of the course be changed to "modern farming" or "farming skills." Second, it is essential that the strongest emphasis be given to a practical approach to agriculture, taking into account issues such as costs and returns, and new and better farming methods than those currently being used in the villages. Only in this way will the course serve as an incentive, rather than a disincentive, for youth to become farmers. Third, reflecting these general ideas, improvements will also be needed in the training of teachers, in the operation of school gardens and farms, in the design of curriculum and teachers guides, and in the coordination with Ministry of Agriculture staff and programs.

Training of Teachers

7.5 Though the majority of rural teachers are also farmers, they have not received any specific training in agriculture or agricultural teaching, and thus tend to use a technology no better than that used by other farmers in their villages. It is thus important that all primary school and JSS teachers should receive some preservice training in agriculture (at least two hours a week) with a strong practical orientation, and should also be expected to look after a small personal plot. If all basic education teachers develop positive attitudes towards modern farming this is an important first step.

7.6 Currently the majority of JSS teachers responsible for agricultural education (known as cluster A teachers, who also teach maths, science and physical education) have had no specific training in agriculture apart from the general JSS orientation. It is thus essential that at least two teacher training colleges be earmarked as inservice training centers for the retraining of these teachers, especially in agriculture (see Chapter 8). Selection of these two colleges will have to be based on the availability of land for college farms and gardens, and staff who can provide practical training. Part of the training would concentrate on teaching how to manage

and run a school garden and farm, including how to draw on the resources of the local extension services and other inputs. The remainder could instruct the teachers how to teach on a lesson-to-lesson basis.

7.7 A new strategy for the preservice training of cluster A teachers needs to be introduced. The current pattern whereby a teacher can only enter St. Andrews Agricultural Teacher Training College/Mampong three years after he has qualified as a teacher, and then has to study for a further three years (making him 32 years old when he finally graduates) will have to be changed. It is thus proposed that all cluster A teachers spend two years in any appropriate post-secondary training college, concentrating largely on how to teach maths, science, and physical education, and then transfer for a third and last year to St. Andrews for a final year of training. St. Andrews would have to double its existing capacity from 150 to 300 students, and give up the three-year program described above. St. Andrews is capable of running the highly practical training needed by cluster A teachers. It is only necessary for the MOEC to resist pressures to upgrade the college so that it no longer serves basic education.

School Farms and Gardens

7.8 At present all schools in the country are required to run school farms, partly to generate income for the schools, and partly to contribute to the agricultural development of the country. The school farm is supposed to be a commercial enterprise, designed to show children that a reasonable income can be made from farming. Unfortunately, school farms have not succeeded in this regard. In many of the schools visited by the team the school farms were no better, and sometimes worse than the farms of neighboring villages, and in some cases they were even making a loss. An evaluation of the school farms in 161 second-cycle institutions in 1985 showed that despite considerable effort, results had been unsatisfactory largely due to lack of advice, inputs, and supervision. In light of the inherent conflict in trying to operate as profitable commercial enterprises while trying to transmit attitudes and teach skills, these results should not be surprising.

7.9 In addition, students are generally not made aware of the management aspects of operating school farms. Through "hands-on" practical exercises it is essential for students to understand the relationship between (and how to calculate) farm inputs (including the value of labor) and the market value of outputs, as well as how the value of the output depends on the time at which it is sold. This type of teaching will require students to play an active role in all aspects of managing the school farm and that they not be used merely as unpaid laborers in an effort to realize short-run profit.

7.10 Only in two schools visited (both under the Global 2,000 program) were purchased inputs such as fertilizers, insecticides, fungicides, or herbicides seen. Though in some instances a low input/low output system of farming is prudent, in other cases the careful utilization of some purchased inputs can produce more than commensurate increases in yields. Students should be made aware of the need, in deciding whether to use these inputs, to balance between maximizing the cash surplus and minimizing the risk.

7.11 Currently there is a district agricultural coordinator in each district education office. Even if travel funds were available it would be difficult for him to visit all 100 or more schools in a district at key times in the farming season and give timely advice and assistance. It is thus recommended that a formal agreement be reached between the MOEC and the Ministry of Agriculture so that agricultural extension agents work closely with school authorities so that the school farm can become more effective. If the school farm can operate efficiently this will be one way of helping spread modern farming techniques to the surrounding community, as students could be encouraged to discuss the differences between school farm techniques and those used at home. Students could also be encouraged to apply simple, proven, and relatively risk-free techniques at home, such as fruit tree grafting or poultry immunization. Thus it is important that any new seeds or technology that the extension agent is supposed to be spreading could be done at the school, with the extension agent providing frequent and timely advice.

7.12 Like the school farm, the school garden at the JSS level should be designed specifically as a learning activity where students can put into practice things that they have learned in the modern farming course. The garden must be on the school compound or next to the school, whereas the farm can be some distance away. Even urban schools should have some space -- a minimum of 0.1 hectare per class. There would obviously have to be a range of different activities in the garden including leaf crops, legumes, roots, fruits, and trees. Here again the district agricultural coordinator can play an important role. In addition, school gardens will often require a water source, as planting would not always follow the normal rainfall pattern. Finally, to help ensure that the school farm and school garden really become learning resources, some additional equipment might need to be provided such as measuring tapes (to measure the area under a particular crop) and spring balances (to weigh both the inputs and the products of the farms).

Curriculum and Teacher Guidance

7.13 Although the general and specific objectives of the agricultural curriculum at the JSS level are clearly stated in the syllabus, the textbooks are clearly written and illustrated, and a teachers guide will soon be ready for distribution, the teacher will still need considerably more guidance. Considering the fact that the cluster A teacher is usually untrained, he will need to have step-by-step guidance in teaching the curriculum. For each lesson he will need to know what the objectives are in terms of behavior, attitude, knowledge and skills and how to evaluate their achievement. He will particularly need to know what practical activities should be carried out and how. In the school situation it may be relatively easy to carry out practical work with poultry, crops and vegetables; but pig, sheep, goat, or cattle production experience will have to be gained through organized visits to local farmers. As much as possible every lesson must have at least an observational, if not a practical content. Thus the revised teachers' handbook should include a detailed lesson plan for each period.

7.14 In order to make it easier to define lesson content of a practical nature, and to make the whole course structure clearer, the use of a modular system for teaching materials preparation can be of immense benefit. The work already completed can readily be adapted to such a format; a demonstration of

how this can be done is given in Annex 7-1. To supplement the existing materials, a lesson-by-lesson outline can be prepared. The entire syllabus would be presented in about 14 modules.

7.15 The farming curriculum should be even more flexible than other parts of the JSS curriculum and be revised more frequently. It is likely during the early years of implementation that some elements of the existing curriculum will be found irrelevant to the real farming situation, or impossible to demonstrate or teach practically. These elements could be dropped. Other elements might need to be added such as crop storage, or bee keeping. Only if the curriculum can really respond to the needs of youth who will become farmers, will the JSS have a role in increasing agricultural productivity. This is one reason why a synergistic relationship between the school and the local agricultural extension agent is so important.

Chapter 8

Training and Supporting Basic Education Teachers

8.1 Due to the economic decline of the 1970s, large numbers of trained and highly qualified teachers left the country and were replaced by untrained teachers in primary and middle schools. The result has been over a decade of ineffective basic education instruction characterized by rote learning.

Preservice Teacher Training

8.2 Prior to implementation of the reform Ghana's teacher training colleges offered either a four-year post-middle school course or a combination of that course and three-year post-secondary training. Under the reform program, Government has begun to phase out the four-year post-middle school course and intends gradually to eliminate all untrained middle-school leavers from the basic education teaching service. The goal is to supply all primary and junior secondary schools with teachers who will have received three years of post-secondary teacher training.

8.3 The objectives of the new teacher training policy are two-fold. First, by raising the entrance standard to post-secondary level, the policy aims to improve the quality of basic education teachers by strengthening both their knowledge of subject matter and their literacy and communication skills in English. Second, the new policy is geared to produce teachers who can encourage inquiry, creativity, and manipulative and manual skills. In support of this objective teacher education is to be reoriented toward the teaching of skills rather than mere academic knowledge.

8.4 The new training scheme will offer a single program of study for both primary and junior secondary school teachers. It is predicated on a division of the country's 38 teacher training colleges into two groups. Those colleges designated as Group I will offer subject majors in two of the following areas: mathematics, science, agricultural science, technical skills and technical drawing. Similarly, Group II colleges will select two subject majors from the following list: social studies, French, literature in

English, and vocational and life skills. In order to ensure that a sufficient number of teachers with technical skills are produced, ten colleges (one per region) will be selected to offer technical skills as one of their major subject areas. Trainees at all colleges will study the same group of core subjects, consisting of education, cultural studies, physical education, English language, basic mathematics, and Ghanaian languages.

8.5 The team was assured that the philosophy and rationale of basic education will be conveyed clearly in the new training curriculum and that newly-trained teachers will be instructed on how to impart literacy, numeracy, and general skills so that graduates of basic education will have acquired a foundation for productive self-employment. However, the team was concerned to learn that the principal of one teacher training college visited had not received copies of either the JSS syllabi or textbooks by mid-August. More broadly, it was surprising to see that the newly-designed teacher training policy does not fully reflect either the structure or the philosophy of JSS.

8.6 While teachers in junior secondary schools are classified as either cluster A, B, or C, these distinctions do not apply in the training colleges. In principal, cluster A includes science, mathematics, agriculture, and physical education; cluster B covers languages and social studies; and cluster C comprises technical and vocational/life skills. It is recognized that in practice it has not always been possible to adhere to these cluster designations (e.g., it is often necessary for the "cluster A" teacher to teach technical skills because the "cluster C" teacher is not trained in those areas). However, under the new division of training colleges the teaching of cluster C subjects -- vocational/life and technical skills -- will not be provided in any one place. Ten Group I colleges will prepare trainees to teach technical skills, while certain of the Group II colleges will offer a major in vocational and life skills.

8.7 Thus, the structure of the training system adheres to the old notions of specialized teaching of individual subjects rather than reflecting an integrated approach to general skill training that will prepare students to use tools and do things skillfully with their hands. The result is a system that will produce some teachers trained in technical subjects and others trained in vocational/life skills, but no teachers capable of teaching the general skills that together represent the centerpiece of the JSS curriculum. The team recommends that general skills training should be provided so that JSS cluster C subjects can be taught in an integrated fashion by a single teacher. This might be accomplished by providing all such training in the ten colleges that have already been selected to offer the technical skills major.

8.8 The study team was also concerned by the GES plan to offer the identical training course to all teachers of basic education, whether at primary or junior secondary school level. It was noted that although there is a clear and intentional relationship between the two levels of basic education, teacher training ought to reflect the different skills, functions, syllabi, and textbooks employed by teachers, as well as the different degrees of intellectual development found at the two levels. The team felt that the training colleges should be restructured to provide training that is largely separate for primary and junior secondary school teachers. At the least, some

specialized training in techniques of teaching young children should be offered to teachers of primary grades.

Inservice Training

8.9 With the initiation of the reform program in 1987, MOEC provided a two-week orientation program for all post-secondary certificate holders teaching in the new junior secondary schools, and a three-week course in the rudiments of teaching for A-level National Service men and women. GES is considering the possibility of providing further in-service training for the regular teaching corps during the long vacations.

8.10 The study team was pleased to find that training had been provided to all teachers met in the field, and that they had clearly understood the basic concepts behind the reform. However, although teachers universally felt that the initial orientation gave them a valuable introduction to the reforms, it did not provide the substantive subject training they require to perform successfully in their new roles. With only this short orientation to the goals and framework of the reform, teachers have not been prepared to teach any differently than they have always done. If there is to be a change in teacher behavior in support of implementing the new curriculum, inservice teacher training for those JSS teachers already in the system must be made much more intensive than is currently envisaged.

8.11 Specifically, it is strongly recommended that ten of the 38 teacher training colleges close off their regular intake for the next several years in order to make their facilities and tutors available for a continuous program of intensive, inservice training courses for every primary and JSS teacher. Of the colleges earmarked for continuous inservice training, at least two should be used specifically for the retraining of cluster A teachers, especially in agriculture (see Chapter 7), and two others for the practical training of all cluster C teachers. Training should last between two and four weeks (longer for cluster C teachers) and be offered once a year for the next three years. It is recognized that the effect of such a policy would be production of a smaller number of newly-trained teachers in the short-term. But this cost will be more than balanced by the benefit of upgrading very large numbers of existing teachers who otherwise will not be trained to do the job that is expected of them.

Supervision and Support

8.12 In addition to appropriate preservice and inservice teacher training, successful implementation of the reform will require a strengthened system of supervision and support. Responsibility for inspection of basic education institutions rests at the district level, and is shared among district-based inspectors and cluster-based circuit officers. On average there is one circuit officer position for every 20 schools. Day-to-day support is to be provided by headmasters.

8.13 During the past year the Inspectorate Division of GES has provided a one-week program of inservice training to all basic education inspection staff to prepare them for their new responsibilities under the reform, and additional training is being planned. Further training is essential if

inspection staff are to have a positive impact in the schools. All basic education headteachers have also received training during the past year.

8.14 Despite the large number of newly-trained inspection staff, field visits indicate that most schools have not been visited in the past six months or more. This may be due in part to transport difficulties among inspectorate staff, but much more to the lack of a system of accountability. Moreover, many of these staff, as well as JSS headmasters, are currently operating without clear job descriptions to help them perform their assigned tasks.

8.15 The team recommends three means of strengthening in-school supervision and support. First, GES should resolve the transport problem by providing bicycles to all circuit officers, and mopeds or motorcycles to all district-based inspectors. Inspection staff could keep these vehicles (for personal as well as professional use) as long as they demonstrate that they had visited each of their schools at least five times a year. Second, it is recommended that the MOEC create an independent monitoring system at the district level to oversee performance of the inspectorate staff as well as the District Education Office and schools, and establish a minimum performance standard (e.g., a minimum number of inspection reports to be delivered per term). As a disincentive to poor quality work, pay should be withheld from inspectors who fail to meet this minimum. Third, MOEC should contract with a local organization to prepare job descriptions for all inspection staff and school managers. This task might be undertaken by GIMPA, and then augmented by recommendations prepared by an advisory group comprised of representatives from IEPA/University of Cape Coast. Finally, a teachers journal should be produced bimonthly and distributed free to all basic education teachers (to be collected with salaries from the District Education Office). This journal should have articles on the solution of common problems.

Chapter 9

Some Past and Present Training Initiatives and Their Impact

Agricultural Training

9.1 Given the importance of agriculture for the Ghanaian economy, it is astonishing that so few of the country's training resources are devoted to agricultural training. There are only four farm institutes and a handful of agricultural training programs, most of which are supported by religious groups. These can be compared with a vast array of government- and privately-supported non-agricultural training programs, which are discussed below.

Informal Training for Technical and Vocational Trades

9.2 Training for productive employment in urban and rural informal trades has been and continues to be undertaken largely through the traditional apprenticeship system. Master craftsmen provide the vast majority of all skills training in Ghana today, probably as much as 80% or more. Such training is provided by a wide range of craftsmen in traditional as well as more modern trades. In light of Ghana's weak modern industrial structure,

this system of informal trades training has played an indispensable role in the country's economic development. A common feature of informal sector apprenticeships is a contract that stipulates the terms of the arrangement. These generally include a cash payment and several bottles of liquor offered by the new apprentice to the master at the beginning of the apprenticeship period plus, in some cases, a final payment in exchange for up to five years of skill training, room and board, and often a small daily allowance. Upon completion of the training, and sometimes after working as a paid journeyman, the apprentice leaves the master to establish a business of his or her own.

9.3 On occasion informal sector craftsmen have received support from the formal training system. This relationship is exemplified by a program begun in 1974 by the National Vocational Training Institute (NVTI)-Kumasi that taught theory to apprentices of illiterate masters in the Suame Magazine. NVTI has also provided "problem-based" training to 60 masters during evening hours. Another training effort for small-scale "wayside" mechanics in Accra and Kumasi consisted of short but regular visits to workshops of interested masters by a team of skilled mechanics/instructors. These programs provide useful models for support to the informal training system.

Formal and Non-Formal Trades Training

9.4 In addition to the informal apprenticeship system, Ghanaian youth can obtain skills training through a wide range of formal and non-formal training institutions and programs. Chief among these are the Ghana Education Service (GES), NVTI, the National Youth Organizing Commission (NYOC), the Department of Social Welfare (DSW), Department of Community Development (DCD), Opportunities Industrialization Centre (OIC), GRATIS, Integrated Community Centres for Employable Skills (ICCES), a variety of church-sponsored training institutions, and a large number of private-for-profit training activities. Training provided in these institutions varies in duration and type. Programs can range from one year (in certain ICCES courses, for example) to four years (NVTI and GES). They also differ with respect to the amount of theory and practical experience they offer, and in terms of their relationship to industry and the informal employment sector.

9.5 The Ghana Education Service operates a variety of tuition-free training programs serving approximately 8,000 youth (see Annex 9-1). First, GES offers a four-year "block release" course at its Accra, Kumasi, and Oradi technical training institutes for about 1700 students. These serve mainly middle-form IV leavers who are already apprenticed in industry or, sometimes, with informal sector masters. The course includes a mix of institutional training (theory and practice) and on-the-job experience, alternating between the two every 17 weeks. Applicants for block release courses register as apprentices with NVTI. GES also offers pre-employment courses to middle-school leavers who plan to enter industry. After completing two years of coursework, the student qualifies to re-enter the institute after one year of practical experience with an employer. In addition, GES runs a three-year course in a range of craft areas at 17 other technical institutes. Enrollment during the 1987/88 academic year was roughly 6,300. The goal is to offer 40% theory and 60% practice, supplemented by industrial attachments. Since industrial attachments are difficult to obtain, GES would like to compensate for this lack of on-the-job experience by offering more time for

practical work. Unfortunately, this has not been possible as a shortage of funds for materials has limited practical activities.

9.6 Graduates take either an examination set by GES or, more recently, the City and Guilds of London trade test. According to a 1987 assessment by ILO, graduates' chances of finding wage employment at the supervisory level to which they are trained are slim. Moreover, data from three typical three-year institutes indicate that between 15% and 30% of students who entered in 1986 had dropped out by 1988, usually due to lack of finances.

9.7 NVTI was originally established to oversee the apprenticeship system, organize trades testing, and devise model training programs that could be replicated and expanded by other government and non-government training institutions. The training of informal sector masters and their apprentices (para. 9.3) are two examples. Despite this mandate, NVTI's major activity today is the operation of 17 training centers, with a total enrollment of approximately 2,000. NVTI offers a "dual apprenticeship scheme" that aims to combine theory and on-the-job industrial apprenticeship training. The training is designed to reflect the needs of industry in a number of apprenticeable trades, including mechanical, electrical and building trades, other vocational trades such as weaving, shoemaking, and canecraft, as well as dressmaking and cookery. The course lasts four years (two years for dressmaking and cookery) and leads to the National Craftsman Certificate. Sixty percent of the trainees come from industry, while the remaining 40% are middle-school leavers. Instructors are paid by NVTI, and trainees pay fees of up to 3,000 cedis per term. Due to frequent difficulties in receiving government subventions, many of the centers have resorted to establishing production units to generate sufficient income to continue training activities and also to provide the necessary industrial experience for trainees.

9.8 One strength of certain of the NVTI centers is their ability to offer quite highly-sophisticated training and provide tool sets to those who pass the National Crafts Certificate (NCC) exam. However, they are unable to provide the essential on-the-job experience to trainees who do not come from industry. Trainees in many centers -- especially those located in rural areas -- are unable to obtain apprenticeships because local contractors do not have sufficient work. A related problem at certain centers is that the sophistication of the tools and equipment cannot be matched by local craftsmen. Other centers, on the other hand, suffer from a lack of up-to-date machinery, and all contend with a shortage of materials for practicals. In addition, the team was told that a large number of trainees (up to 40% in some centers) leave the program after having passed the Grade I trade test (after two years of training), presumably because they cannot afford to continue paying fees and forego the income they could earn as semi-skilled craftsmen.

9.9 The National Youth Organizing Commission provides a unique type of skills training to about 200 youth at four centers in Greater Accra, Ansakare-Ashanti, Volta and Eastern regions. NYOC is the major program whose objective is to train middle-school leavers and dropouts for productive employment in the informal sector. Thus, the program stresses practice (80%) over theory (20%), and emphasizes basic business administration, accounting, and leadership training in addition to trades training. Trainees gain practical experience through outside contracts (from local carpenters or masons, for

example), as well as from construction and maintenance of the centers' facilities. Applicants must pass an English proficiency test and a three-day interview. It is expected that graduates will spend a year working as National Service men and women, during which time it is hoped they will be able to save enough money to buy tools to start their own businesses. The centers operate largely on funds provided through the Ministry of Youth and Sports; agricultural and other productive activities bring in some additional income, and tools and materials have been donated by a few individuals. Students buy their own exercise books but pay no fees.

9.10 The Department of Social Welfare within the Ministry of Mobilization and Social Welfare provides two forms of training for self-employment in the rural areas. First, courses are offered in ten centers (former remand homes) to over 2,000 delinquent and nondelinquent boys. Subjects include carpentry, masonry, welding, tailoring, crafts, and agriculture. The course is largely theoretical (80%) and lasts between two and four years, depending on the trainee's ability. The Department also provides training for about 300 girls (about half of whom are delinquent) at centers in Accra, Cape Coast, Kumasi, and one in Upper Eastern Region. Although DSW offers its own certificate, some graduates take the NVTI Grade II trade test. In an effort to assist graduates to obtain the basic tools and equipment for self-employment, resettlement committees liaise between DSW and local banks to raise notes for this purpose. Approximately 50% of graduates - those whose parents or other local sponsor can serve as guarantor -- have been able to benefit from this scheme.

9.11 The Department of Community Development operates 15 women's training institutes offering a two-year program to approximately 1,000 women of varying educational backgrounds. The program is geared to self-employment in catering, dressmaking, hairdressing, child care, primary health care, and general home science. The Department also operates four Centres for Rural Industries at which 250 male middle-school leavers and drop-outs are offered a two-year course in farming plus one other skill area. DCD offers its own certificate, but most trainees prefer to sit the NVTI Grade II trade test, presumably to obtain wage employment. Tuition and accommodation are provided free of charge, while students pay \$6,000 per term for feeding and training materials. Despite a high level of demand for DCD training, places are limited due to lack of accommodation and delays in receipt of the Government subvention for feeding.

9.12 The Integrated Community Centers for Employable Skills (ICCES) provide vocational training, mainly in the smaller towns and rural areas. The focus is on school dropouts, women, and the handicapped. Six centers operate at present and a further eleven are planned to open in 1989. If operating at maximum capacity, each center is expected to train 72 people annually. Trades currently taught across all centers are carpentry, masonry and dressmaking, with auto mechanics and outboard motor repair offered at some centers. Instructors come from various foreign voluntary agencies and the NSS, and local craftspeople are recruited as counterparts to the volunteers. The ICCES headquarters is autonomous and reports to the Secretary for Education through the Coordinator for Non-formal Education.

9.13 ICCES has several distinct features. Staff and tools are only supplied to communities that have demonstrated a strong commitment by totally financing the workshop structures and providing accommodation for all volunteers. Town Development Committees are centrally involved throughout, including the selection process. The atmosphere of the centers reflects work rather than school -- no school holidays or external certification, afternoon work on farms, a strong commercial orientation, self-help training modules, and community involvement. The centers encourage graduates to develop cooperatives, and will allow interim participation in their production units. Nonetheless, over the next several years it is expected that ICCES output will be greater than community demand for newly-trained craftsmen, and that ICCES graduates will not be able to support themselves in their own communities.

9.14 Opportunities Industrialization Center (OIC) offers fee-free training at centers in Accra, Kumasi, and Takoradi. Although its target is middle-school dropouts, OIC also accepts middle- and secondary-school leavers. The program receives partial funding through the Ministry for Mobilization and Productivity. It is characterized by small class size (generally 15 students per course), job counseling, and placement services. Course offerings across centers include carpentry, masonry, and secretarial skills, with plumbing, auto repair, textiles and ceramics offered in at least one center. The program lasts 15 months; remedial help in mathematics and English is provided during the first three months, while on-the-job training in large firms is offered during the last three. Graduates sit the NVTI Grade II trade test for building or the Grade I or NCC for secretarial skills. OIC is unique in its conduct of market surveys to determine labor market needs and tailor training courses accordingly. As a result of a recent survey the Kumasi center is considering withdrawing its plumbing course and adding training in entrepreneurial skills. Further, as OIC job developers have found it increasingly difficult to find wage employment for graduates, OIC is beginning to shift its focus more toward preparation for informal sector employment. Thus far job placements have been entirely urban, but it is expected that as OIC offers more courses in trades such as textiles that future graduates will be better prepared for self-employment in the rural areas.

9.15 GRATIS, the Ghana Regional Appropriate Technology Industrial Service, prepares middle-school leavers with some apprenticeship experience for self-employment. It currently operates two centers, called Intermediate Technology Transfer Units (ITTUs), in Tema and Tamale, and is constructing a third in Cape Coast. The plan is to open one center per region by 1992, each serving about 20 day students. The course lasts one year, and students pay a fee for materials. GRATIS is the successor to the Technology Consultancy Center (TCC), which was established by the University of Science and Technology to support informal sector master craftsmen in the Suame Magazine, Kumasi. Both TCC and GRATIS have been able to make low-cost equipment available to graduates by obtaining second-hand equipment through external donors. GRATIS then provides a testimonial to graduates to help them secure bank loans to purchase the equipment.

9.16 In addition, there is a range of small training programs supported by various religious groups. Several centers run by the Christian Council serve about 1,000 trainees. The Catholic Secretariat operates 30 vocational schools (15 in the Volta region), one technical institute, and five farms.

The majority of this vocational training is directed at girls, who are given a four-year program in sewing, weaving, and local crafts. Although the Church would like to expand its training programs and offer tools to graduates to help them become self-employed, it has difficulty doing so owing to lack of funds. One interesting exception is a church-sponsored program offering two years of non-residential training to girls in weaving, and providing looms to the participants at the end of the course. Finally, the YMCA operates four centers for middle-school leavers and secondary school drop-outs, and attempts to provide tools to graduates of its programs.

9.17 There are also a large number of privately-owned institutions providing technical, vocational and commercial training to middle-school leavers and drop-outs who fail to enter any of the public or nonformal programs. During the 1986/87 academic year there were in operation 23 technical schools (11,524 students enrolled), 32 vocational schools (enrollment 5,398), and 77 commercial schools (enrollment 15,737) (see Annex 9-2). These programs operate without regulation and tend to be characterized by poor physical facilities, over-crowded classrooms, poor tuition, high rates of examination failure, and high fees (particularly in urban areas). They also suffer many of the problems that plague the public institutions, such as lack of materials and difficulties in providing on-the-job training.

Trades Testing

9.18 Trade tests are conducted by a number of local and external testing bodies. The City and Guilds of London and the Technical Education Unit of the GES conduct tests that are taken only by candidates who have received formal training. The NVTI administers trade tests with a more practical orientation; they are open to craftsmen trained through either the formal or informal systems, and for the illiterate as well as the literate. NVTI awards certification at Grade II, Grade I, and National Craftsman Certificate levels; it also offers certification in trade proficiency (which excludes testing of trade theory) at the Grade II and Grade I levels. Of these, the Grade II/Proficiency test is taken most often by informal sector craftsmen, irrespective of their level of education. An informal survey of newspaper advertisements for artisans reveals that the NVTI credential was asked for by employers nearly three times as often as the GES/City and Guilds qualification (see Annex 9-3).

Observations and Conclusions

9.19 The team observed that youth who have passed through formal programs with a high practical training content, and those who have completed apprenticeship programs can usually earn a reasonable income. On the other hand, those who complete a more theoretical training, such as that offered by GES technical institutes, find it difficult to find productive employment. It was also noted that many of those enrolled in the four-year NVTI programs choose to leave formal training after a year or two, by which point they have acquired sufficient skill to pass the Grade I trade test. It appears that training of one or two years is long enough to prepare a craftsman to render a marketable service. Beyond that point, the opportunity costs to training become too high for many trainees. In this light, the large number of three-

and four-year programs that currently train people for City and Guilds or the NCC level do not seem warranted.

9.20 In addition, the team noted that most programs are geared to produce graduates for jobs in the formal employment sector. The major exceptions are programs offered by the NYOC, GRATIS, ICCES and the Department of Social Welfare, whose express purpose is to equip youth with the skills required for self-employment. OIC is also beginning to reorient its training in this direction as it encounters increasing difficulty in placing its graduates in the formal sector. One of the key differences between the NYOC approach and that of the others is that it provides training in skills such as basic business administration, accounting, and marketing. Given the current contraction of formal sector wage employment, programs need to provide basic entrepreneurial skills training if they are to be responsive to the existing labor market requirements.

9.21 In order to rationalize and strengthen the country's system of formal, nonformal, and informal training so that it can be more supportive of the growing number of JSS graduates who will require further skills development, the team recommends that NVTI relinquish its current direct training activities and concentrate instead on a range of key system-wide responsibilities. These would include generating appropriate training models that can be copied by other vocational/technical training providers, offering guidelines on syllabi and curricula to reflect better the needs of the informal sector, and developing and administering a uniform system of trades testing to replace the less practical City and Guilds. NVTI should also coordinate and administer the new industrial training levy, and carry out market research and graduate tracer studies.

9.22 In light of the central role being played by informal sector master craftsmen in providing productive skill training for youth, it is also recommended that a major emphasis of both NVTI and GES technical institutes must be on supporting these informal apprenticeships. In this regard, NVTI should mount large-scale training programs for master craftsmen, in the evening at local workshops on a part-time basis if necessary, but also from its regular centers.

9.23 Further, GES technical institutes should no longer run three-and four-year training programs, but should use their full capacity to provide six-month to one-year theoretical and workshop training to youths who have already completed two years of work in the informal sector and have passed the NVTI Grade II proficiency test. This training, along with all other technical training programs, should include simple business administration, accounting and marketing skills. Upon completing a short course at the technical institutes, trainees would take the Grade I trade test, then spend an additional year or two as apprentices, attend a technical institute for another six months to one year, and finally take the NVTI advanced test.

9.24 Regarding the more difficult problem of skill training for rural areas where there is not always the network of master craftsmen with whom youth can be apprenticed, it is recommended that certain GES technical institutes or NVTI centers be earmarked to provide one-year training in agriculture and a simple skill such as carpentry, bicycle fitting, or

tailoring to youth who have been working as farmers for at least two years after leaving school.

9.25 In an effort to support and increase effectiveness of the approximately 100 non-formal, religious, and private training programs currently operating in Ghana, the government needs to address several issues. First, it will be essential to strengthen the pedagogical skills of the instructors who, although they may be competent in their field of technical or vocational expertise, have not had adequate (if any) training in how to teach. GES could play an important role by training these trainers. Second, graduates of most training programs, whether non-formal or formal, find it difficult to obtain the essential tools to begin work on their own. It is critical that some form of credit or other means by which new workers in the informal sector can acquire basic tools and working materials be made available so that they can become productively employed.

PART III RADIO FOR FORMAL, NON-FORMAL, AND INFORMAL EDUCATION

Chapter 10

Current Broadcasting Systems

10.1 In countries where systems of communications and transport are poor, newspaper circulation is limited, and illiteracy high, radio can play an important role in alleviating isolation and ignorance as well as helping to enrich daily life and accelerate development. It can reach the masses immediately, capture the imagination, and be a bright spot in otherwise poor and barren circumstances. It is also relatively inexpensive.

Broadcasting Networks

10.2 The Ghana Broadcasting Corporation (GBC) operates both sound and television broadcasts with an annual budget of approximately \$860 million. Annual income from commercials and announcements is about \$100 million. GBC operates two shortwave radio networks broadcasting from 50 kw transmitters: Radio I which broadcasts in six local languages, and Radio II, which carries advertisements and broadcasts in English. In theory the two channels cover the whole of Ghana, but in practice there are areas, especially in the north, where reception is unintelligible. The signals from Radio I are received by nine regional and 38 district relay stations, where they are amplified and transmitted by wire to rediffusion boxes in subscribers' offices and homes. The subscription fee is \$2 per month. GBC is responsible for maintaining the line and the boxes, but as the last batch of boxes was distributed at least twelve years ago, most do not function satisfactorily. Although GBC wants to phase out wire broadcasting and encourage the use of wireless receivers, wireless ownership remains limited --not more than 25% of households -- most of which are in urban areas.

10.3 In addition to the two shortwave channels, there are three FM stations -- FM Accra, Apam FM Community Station, and URA Radio in Bolgatanga in Upper East Region, which has a relay station in Han in Upper West.

Program Production

10.4 Most programs broadcast on the two national networks, the FM Accra station, and the External Service are produced in 23 studios at the Broadcasting House in Accra, the exception being the programs produced by regional relay stations and sent to Accra, either by microwave links or physically, for nationwide broadcasting. The accommodation and technical facilities at the three regional relay stations visited by the team appear to be inadequate and below acceptable standard. Productions generated there for national transmission are unlikely to be of broadcast quality. Although some of the 23 studios in Accra have recently been renovated and had new equipment installed, the rest are in need of overhauling and technical upgrading.

10.5 The major share of air time on all channels is devoted to news and music. Radio I and Radio II each devote 125 minutes a day to school broadcasts. Each week Radio I broadcasts about ten hours of rural programs in six local languages, while Radio II has a half-hour weekly program for young farmers in schools and colleges. Other informal educational programs focus on children, women and youth, as well as current affairs and religion.

10.6 The two community FM stations, Apam and URA, relay signals from Radio I for 60% of the total airtime, and produce local programs for the rest. Analysis shows that not more than 12% is devoted to programs designed for the improvement of community life. The URA station, broadcasting in six languages of the region -- Gurene, Kusaal, Sissala, Kassem, Builsa and Dagaari -- claims to be "rural-oriented with particular emphasis on agriculture," but in fact this is true for less than 11% of the programs. No regular program schedules are published for the general public.

Audience Research

10.7 The GBC Audience Research Department has 38 professional positions, although only five of these are filled. Funds and facilities are limited, and data are manually processed. It is therefore not surprising that very little is done in this important area. Several methods have been used to get feedback, the most common of which is the listeners' panel approach. The Audience Research Department retains one panel each for Radio I and II, and FM Radio Accra. Members are volunteers who come from every region of the country and from various educational backgrounds. At present, the radio panel has 350 members and FM Accra 60. Annex 10-1 contains details of this method of audience research. Due to a scarcity of resources -- personnel, means of transport, and equipment -- other activities are negligible.

Personnel

10.8 The total GBC staff strength is 2,830. The radio division has a staff of approximately 270, including 180 producers. The Schools Broadcast and the Rural Broadcast Departments have 17 producers each. Considering their limited activities, regional and district relay stations are overstaffed. The

Western Region, for example, has a total staff of 109 for the six relay stations which operate with weekly direct costs (production expense, fuel, travel expense etc) of between ₵100,000 and ₵150,000. Similarly, despite its very limited facilities the regional station at Kumasi has a staff of 86.

Chapter 11

The Use of Radio to Support Basic In-School Education

Historical Background

11.1 The use of radio to support basic in-school education was introduced in Ghana in 1956. Since then radio for schools has been broadcast by GBC without interruption. Although great efforts were made to experiment and pilot school radio programs, responsibility for school broadcasting has rested with GBC, with only limited input from the education sector. The result of this approach is that educational programming has received low priority. This problem is reflected by the failure of the national radio schedule, Radio & TV Times, to announce schools broadcasts; it prints either "close down" or merely "Schools Broadcasts" with no further information. At the regional relay station at Cape Coast, where only one of four amplifiers is in working order, the team was told that the station stopped relaying schools broadcasts in order to reduce the strain on the only working machine.

The Current Situation

11.2 Currently GBC devotes two hours per day each on Radio I and Radio II to broadcasting programs for students in primary, JSS, senior secondary schools, and teacher training colleges. The ten hours per week on Radio I are divided into 50 slots of which less than a third are for primary schools, and the rest for the two years of JSS. The ten hours on Radio II are divided into 50 slots for broadcasts to secondary schools and teacher training colleges. Short slots are neither effective nor practical. First, they are too short to allow time between one slot and the next, which presents a problem in schools because the radio must often be moved from one classroom to another. Second, as the teacher is expected to spend some time preparing the class before the broadcast and organize follow-up learning activities after the broadcast, a broadcast of less than ten or fifteen minutes would hardly seem worthwhile. Although it has been argued that the radio cannot hold the attention of the class for longer periods, with proper techniques to stimulate interest and class participation young children do not find schools programs of 25-30 minutes too long.

11.3 The current allocation of educational broadcast slots does not appear to be cost effective. The following table shows that while 50% of the slots are devoted to senior secondary schools and teacher training colleges, these groups represent only 7% of the potential listening audience.

<u>Levels and Number Of Grades</u>	<u>Number of Slots Allocated</u>	<u>Approximate Number Of Potential Listeners Per Grade</u>
Primary II - VI	16	200,000 - 300,000
JSS I & II	34	160,000 - 180,000
Senior Secondary I-V	30	20,000 - 30,000
Teacher Training I-IV	20	2,000 - 3,000

11.4 The programs currently being transmitted are of poor quality from a broadcasting as well as an educational point of view. The minutes of the fourth meeting of the schools broadcasting Technical Committee, a group composed of staff from GBC and MOEC, show that programs are mass-produced at very low cost, with no clear educational objectives (see Annex 11-1 and Annex 11-2). In addition, expenditures for program production are extremely low. For scripts of up to 15 minutes long GBC pays \$300 to the scriptwriter and \$150 for recording fees. Further, the minutes of the meeting of the Technical Committee reveal it was decided that the controller of schools broadcasts alone should "vet" all scripts. Experience from other countries indicates that the task is not humanly possible.

11.5 Although in the past GBC's schools broadcasts were accompanied by well-designed print support in the form of teacher guides and pupil workbooks, samples of which still exist, none has been produced for many years. The only printed material sent to schools at present is cyclostyled sheets of skeleton broadcast schedules, one sheet for each channel. None of the schools visited by the team, however, was in possession of these.

11.6 According to the liaison officer of the MOEC and the controller of schools broadcasts, monitoring measures have been suspended for some time due to lack of funds and transport. At present it is not known if any schools have receivers or whether those that are equipped actually make use of the broadcasts. Out of more than fifty schools visited by the team, only one had a radio and this was not used for listening to regular school broadcasts, but for recording a French language series intended for the general public. Although GBC contends that there are 2,288 listening schools, the general consensus is that no one listens to school broadcasts at all (although teachers and headmasters at all schools visited told the study team that they would like to use the radio in the classroom).

Possible Role of Radio in Basic In-School Education

11.7 In addition to the current two-hour daily segments each on Radio I and Radio II already carrying schools broadcasts, the GBC has pledged another daily 30-minute slot from 20.30-21.00 on Radio II. With this amount of air-time a great deal could be done to improve the quality of teaching and learning in school. Broadcasts directed at students during these two hours would automatically train the classroom teacher, who has to prepare the students before the broadcast, listen and participate during the broadcast, and organize follow-up activities after the broadcast. In other words, the teacher would learn both by example and by undertaking the activities necessary to make the broadcast educationally effective. To complement the daytime school broadcasts, the evening air-time should be used for inservice

teacher training. The range of objectives in this area is wide, from giving straightforward instruction to enriching conventional teaching. In present circumstances the role of broadcasting as a catalyst for curriculum reform is probably the most attractive proposition.

Process of Program Development and Program Formats

11.8 Development of broadcasts for in-school education must start with clear educational objectives, which must be identified by educators. At the same time educators must have a clear understanding of the limits and demands of the medium. Team effort with inputs from educators and broadcasters is desirable, but in the final analysis the responsibility for achieving educational goals rests with the educators. The present state of school broadcasting in Ghana calls for immediate development of a cadre of educational broadcast specialists within MOEC. These specialists should work closely with, or form part of, CRDD. They also must work closely with GBC personnel at the production stage.

11.9 The task of analyzing the curriculum, identifying the problem areas and the areas in which the radio could play the most effective role, defining educational objectives, developing a broadcast curriculum out of the school curriculum, and drawing up program series and topics, can only be done effectively by a team representing different aspects of the teaching-learning process. It should include curriculum specialists, teachers, subject specialists, educational broadcast specialists and program producers.

11.10 Broadcasting can be used in school in three ways: to teach one or more subjects directly, to be a learning resource, and to enrich conventional classroom teaching. Although "direct teaching" radio has been used successfully to implement curriculum reform in developing countries, such as the Radio Mathematics Project in Nicaragua, this approach seems too demanding to introduce in Ghana at present.

Training of Teachers in Communication Skills

11.11 Assuming that broadcast programs, both for class listening and in-service teacher training, are of good quality, both in educational and broadcasting practice terms, teachers should automatically learn a great deal by example. For teachers whose ability to communicate in English is weak, radio is an inexpensive and effective training tool. Programs for this purpose should not too obviously aim to teach. Rather, they should entertain and have sufficient audience appeal.

11.12 Once the school time-table has been arranged in line with the broadcast schedule, the teacher is expected to read the teacher's program guide at least one day in advance as he or she may be required to find or make simple teaching aids needed during the broadcast. Before the broadcast about 15 minutes should be spent on review of the last program if it is part of a series. Otherwise the teacher can lead a discussion of topics relating to the content of the program. During the broadcast the teacher is sometimes required to undertake simple tasks such as pointing to objects or arranging students into groups. All instructions will be clearly given both in the teacher's guide and on the radio. After the broadcast the teacher should pay

attention to individual students who did not quite follow the learning activities during the programs, and organize or encourage activities relating to what has just been heard. The teacher's guide will contain suggestions for such activities. These pre- and post-broadcast activities compel teachers to practice the communication techniques embodied in the broadcast.

Creation of Positive Attitudes Among Teachers

11.13 Ghanaian teachers, especially those in rural areas, are often isolated, lack confidence due to lack of opportunity for training, and confront an unstimulating work environment. The presence of the radio, which can bring new personalities, as well as the outside world into the classroom, should have a positive effect on the teachers' morale and attitude. Apart from merely transferring messages, radio can help to make teachers feel involved in the educational reform process. Panel discussions consisting of teachers, and interviews of teachers on topics of interest to them or on issues that need clarification, will help create positive attitudes.

11.14 Two-way communication should be developed between the teachers and radio presenters. Teachers should be encouraged to write, and their letters and answers to questions presented on radio. One short air-time slot during the two-hour daily period might be reserved for this purpose. In addition, if the radio is used to furnish needed information to teachers -- such as dates and venues of training courses during vacation, addresses to which to write for handbooks or other materials -- it should encourage the development of a regular listening habit.

Necessary Supporting Structures

11.15 It is essential to have radio coverage with good reception, and sufficiently powerful radio receivers with a reliable power supply (either electricity or batteries). Next, a system of disseminating advance information on program schedules to all concerned is necessary. In addition, print support such as teachers guides must be distributed in sufficient quantities in advance. Most importantly, a systematic program of utilization training must be undertaken well before the first program goes on the air. This training should be built into the overall inservice training program for teachers. A management system at the school level is also required, and guidance should be provided to headmasters. The system of sharing the radio set among classes of different grades must be made clear to teachers, and a routine of moving the set from one classroom to another must be worked out. The adjustment of the school timetable to the broadcast schedule must be done well in advance and with the consent of all teachers concerned. Finally, a monitoring and evaluation system must also be created and implemented.

First Steps

11.16 The broadcast schedules should be re-organized. There should be no programs broadcast to senior secondary schools or teacher training colleges. The two hours daily on each channel should be divided into not more than five slots; the division need not be the same for each day of the week but should be determined by the different lengths of different programs. Intervals between broadcasts must be sufficient for the moving of the receiver

from one class to the next. Radio I should be used for primary level broadcast and Radio II for JSS. A slot of air-times on each channel should be reserved for a program for teachers which should be broadcast live. Teachers should be encouraged to use it, by correspondence, as a platform for their opinions on matters concerning educational reforms and their implementation. Programs should be repeated within the week at least once. Programs that are not substance-oriented and are difficult and costly to produce, such as music programs, should be repeated more than once and each series should be used for two grades.

11.17 It is strongly recommended that not more than two series for each channel should be attempted for the first year. After that the take-up rate should be carefully worked out, taking into consideration the first year's experience and the extent to which the first year's output has to be remade. The team also recommends that the present school broadcasting should be suspended until education program production personnel have been trained and at least four series for the first year have been produced, print support materials have reached all participating schools, and teachers have been trained in program utilization. The distribution should be delayed until not too long before the commencement of the new series.

11.18 The possibilities of broadcasting from the URA FM station independently, with a different schedule and term times to suit the regional way of life, should be investigated.

11.19 A joint GBC-MOEC steering committee should be established. This group should appoint one team per subject area to be responsible for the development of program series and necessary support materials. An educator/media specialist should act as secretary and be held accountable for the team effort. Pre-testing of programs and systematic formative evaluation should be built into the program series development. Pre-testing programs should be kept at a relatively simple level. Several schools in or near Accra should be used as "laboratory" schools where programs can be played to children to test their reactions and to determine if the substance and treatment are at the right level.

11.20 Funds should be made available for remuneration of scriptwriters and performers at attractive rates, as well as for other production expenses. It is recommended that the present rates should be increased fourfold, which should not be impossible considering the fact that the past year's budget for schools broadcasts was only .01% of the total MOEC budget. In addition, necessary equipment and transport budget should be provided to enable production teams to undertake outside recording as well as to visit schools to pre-test programs and monitor program use.

11.21 It is recommended that the Ministry should recruit prospective educational media specialists and scriptwriters from the teaching force and mount an intensive training program in educational radio script writing and production techniques as soon as possible. The School of Communication Studies, University of Ghana should be asked to undertake the training program with the assistance of short-term experienced expatriate trainers. It is recommended that the courses should be practically-oriented and last between four and six weeks.

11.22 Since Radio I and II do not achieve nationwide coverage, the team recommends that a reception survey be undertaken to identify areas where the signal is not sufficiently clear and exclude them from use. Before the distribution of receivers is undertaken the reason for the exclusion of these areas should be explained to all concerned. To circumvent the burden of batteries, maintenance costs, and administrative complication, the team recommends that the radio set be given to school headmasters to own as their personnel property on condition that it should be used to receive school broadcasts two hours a day. The headmaster should be responsible for the cost of batteries over and above what is provided and for maintenance costs.

Chapter 12

The Use of Radio to Support Non-Formal and Informal Education

12.1 In some countries radio has been used to provide and support non-formal and in-formal education for over half a century. More recently, with broadcasting becoming more wide-spread and receivers becoming cheaper, countries the world over have use radio for a wide range of non-formal education programs. Broadcasting has been applied for five broad purposes in non-formal education: to reduce educational inequalities prior to formal education; to reduce inadequacies after formal education has been completed; to meet new needs arising during adult life; to stimulate social action and community or national development; and to raise political consciousness.

Current Situation and Broadcast Schedules

12.2 At present there is no radio broadcasting to support non-formal education in Ghana. The closest thing to non-formal radio is what is left of the once fully-organized Farm Forum, which operated quite effectively during its pilot phase. Since then, however, according to a retired high ranking official of the Ministry of Agriculture who actively participated in the initial stage of the project, it has lost its impact because the GBC did not want input from relevant government agencies. Despite dwindling resource personnel and the high costs of organization, production and travel, GBC expanded the program to cover all of the ten regions. It is estimated that there are 50 farm forums in the country, broadcast in Akan, Ewe, Ga and Nzima, although the team found none during the extensive tours of different regions.

12.3 An analysis of radio program schedules reveals that GBC has a policy to provide informal education through open broadcasting. Programs with educational purpose are diverse in content and cover a wide range of target groups. Topics include health, foreign languages, political awareness, marriage counselling, occupations and life skills, religion and morality. Programs are directed at women, children under six, children over six, youths, senior citizens and others. However, there are only ten hours a week of programs specifically aimed at rural people. Program formats used include talk, discussion, magazine programs, dramatized episodes, and interviews. There is one dramatized serial for farmers in Akan, Nzema, and Ga.

12.4 The team felt that GBC's practice of broadcasting centrally in so many languages leads to a scattering of potentially useful content. For example, one children's program of 15 minutes is broadcast on Monday in Dagbani, Tuesday in Ewe, Wednesday in Akan, Thursday in Nzema, Friday in Hausa, and Saturday in Ga. Fifteen minutes per week is unlikely to have any impact on a child or encourage him to develop a regular listening habit. Parlons Francais, an informal education program for the general public on Radio II has different weaknesses. It is intended for adults, who presumably are motivated or they would not tune in, yet it is only ten minutes long. Moreover, the broadcast time is not quite the same everyday -- at 7.05 on Mondays, Wednesdays and Thursdays, and at 7.15 on Tuesdays and Fridays. It is doubtful if this program has any regular audience.

12.5 The two community FM radio stations, Apam and URA, have other weaknesses. Apam only produces and broadcasts local programs in Fante. However, out of approximately 32 hours of programs produced locally, only eight are development- or community spirit-oriented. Moreover, the station's technical facilities are grossly inadequate. URA, in contrast, has five fully equipped studios. However, since it broadcasts 32 hours and 15 minutes of locally-produced programs per week in six local languages, it is probable that the total sum of substance intended to reach the target groups is spread out too thinly to have any real impact on community life.

Program Formats and Series

12.6 Radio broadcasting for non-formal and informal education and development can be grouped into four types: (1) open broadcasting, (2) broadcasting to listening groups, (3) community-based broadcasting, and (4) broadcasting as part of structured, specific courses or programs.

12.7 Most of the programs with educational or developmental content broadcast by the GBC are considered as open broadcasting, such as Women's Magazine, Children's Corner, and Time with CDRs. For non-captive audiences the broadcaster's first task is to capture as large an audience as possible and to sustain their interest. One proven technique of open broadcasting is to use drama, or soap opera, as a vehicle.

12.8 Another effective use of open broadcasting is the campaign approach. Radio campaigns should have limited objectives and should be concentrated into relatively short periods. This is probably the most effective way to recruit target populations and volunteers, as well as to put across specific messages to the masses, but it must be backed by strong Government support.

12.9 The radio Farm Forum exemplifies broadcasting to listening groups. This approach requires organization and the presence of a trained group facilitator to lead the discussion and provide guidance for group activities. Broadcasting as part of structured self-study courses is used at many levels. In most cases it is part of correspondence courses -- from degree courses offered by open universities to second-chance courses for adults with no formal education qualifications, including functional literacy courses.

Supporting Radio for Non-Formal and Informal Education

12.10 The success or failure of radio for non-formal education depends on conditions surrounding its use. Even if the target audience has access to receivers and the radio signal is clear, success will require other structures as well. First, the target group must be made aware of the program directed at them; publicity is important from the outset (this is one of the weaknesses of GBC services). Second, if the program aims to help people make practical changes in their lives, measures must be taken to ensure that changes can be made. If rural people are motivated to plant fruit trees, for example, saplings must be readily available. Third, for listening groups, it is necessary to recruit, organize and train voluntary group leaders. An administrative structure is needed to provide equipment and supplies (e.g., hurricane lamps, paraffin, dry cells) and keep records. Fourth, a system of developing, printing, and distributing print support must be established for literacy and functional literacy programs. Finally, there must be a structure within which the use of radio is an integral part of the related developmental program, whether it be agriculture, health or community development.

12.11 Radio ownership is currently very low with only 22% of rural and semi-urban households owning radios, and 28% of urban households (a total of 26.5%). The number of working radios at any one time will be considerably less. For radio to play a key roll in non-formal education, strategies to drastically increase radio ownership will need to be developed.

12.12 It is recommended that two of the daily evening air-time slots pledged by the GBC should be used in the first instance for two purposes: to disseminate information to the masses and to mobilize and organize non-formal education target groups and volunteers for a functional literacy program. GBC should rationalize the schedule on GBC I, allocating blocks of time to different language groups and concentrating on fewer programs with regularity and higher frequency. GBC should also develop a daily drama serial both to entertain and carry developmental messages. It should be directed at rural audiences and performed in the most-widely understood Ghanaian language. Finally, chiefs should be encouraged to use the traditional "gong-gong" to publicize the two non-formal education programs as well as the proposed GBC serialized radio drama.

PART IV

NON-FORMAL EDUCATION FOR FUNCTIONAL LITERACY

Chapter 13

Key Players in Current Non-Formal Functional Literacy Programs

Historical Perspective

13.1 In the early 1950s Ghana mounted a large adult literacy campaign, which for almost 15 years was considered one of the most successful programs in Africa, if not in the world. The lead role was taken by the Department of

Community Development (DCD), but a Bureau of Ghana Languages (BGL) was created to prepare literacy primers and follow-up materials, and an Institute of Adult Education (IAE) was created to train literacy personnel, carry out basic research, and test different approaches. The Ministry of Education was involved in the development of primers. Since the whole campaign was based on voluntary teachers, church groups and other NGOs also played an active role.

13.2 One of the reasons for the collapse of the literacy campaign in the mid-1960s was that a great deal of responsibility for organizing the campaign had been placed on town and village development committees which were political bodies. Thus when the Nkrumah government was overthrown these committees almost ceased to exist. However, even before the eventual collapse of the literacy campaign much of its original fire had been extinguished. For example, since 1962, the BGL has stopped producing new post-literacy materials, facilitators had started to exaggerate the number of participants they were teaching, and a general tiredness set in with very high rates of participant dropout (over 80% in some cases). One can conclude from this experience that a campaign based on voluntarism has to be time-limited.

13.3 All the facilitators, whether selected by the DCD, churches, or town and village development committees had to attend a one-three week orientation training before they could start to teach. Basic literacy kits packed in an envelope, comprising a primer, two readers, a pencil and an exercise book were provided free to the facilitator and at a nominal cost to the participants. The course, which was conducted in the local language, took place for 90 minutes a day over a four-six month period. Successful learners received a certificate at the end of the course, and facilitators received a special badge indicating how many people they had made literate.

13.4 The DCD had established a network of facilitator training centers, community development officers, and mass education officers throughout the country. They also had a fleet of mobile book vans, and when these broke down transferred their stock to community centers or chiefs' palaces. Through the years of inaction the network has disintegrated, almost two-thirds of staff positions are unfilled, and the mass education officers "because of transport problems" supervise only three part-time literacy classes. The literacy materials of the 1950s are still being used, despite the fact that there has been considerable development in adult teaching methods since then. The DCD prepared jointly with the BGL a new set of literacy materials three years ago, but no budget has been allocated for their printing even in limited numbers. The Department has more human resources available to restart literacy work than any other agency, but before these can be used there would need to be a large program of retraining and remotivating the staff.

13.5 The BGL was established in 1951 to develop and produce literacy and post-literacy materials in 11 languages. It produced primers and booklets until 1962, and continued to publish regularly local newspapers in eight languages (each with a circulation of around 20,000) until 1968. Since then it moved to the development of primary school texts and teacher guides in the national languages, and to developing Ghanaian literature at a level much higher than could be understood by new literates. Unfortunately, although some of these books have been in the press for 15 years none have been produced. For the past ten years, apart from editing the new DCD materials,

the BGL has not done much. It currently has 62 staff, of whom 14 are editorial staff, and a regional office in Tamale.

13.6 It is important to note the changes in language policy in Ghana. In the colonial period the use of national languages was encouraged: the medium of instruction in both the first three years of primary school as well as in adult education was a local language, and there was a wide diversity of local language newspapers. Shortly after independence it was decided that English should be the medium of instruction from Grade 1, and thus Ghanaian languages were no longer compulsory in teacher training colleges or secondary school, and gradually reduced in importance in other official areas also. In 1974 the education commission recommended that Ghanaian languages again become the medium of instruction for the first three years, and thus the BGL developed a new series of texts, involving ten books in each of 11 languages, that were printed in the late 1970s. The October 1986 policy speech by the Secretary for Education emphasized the fact that local languages should be the medium of instruction in the first three grades and that the learning of two Ghanaian languages was compulsory at every other grade. However, up to now no Ghanaian language textbooks have been produced. The team felt strongly that serious attention would have to be devoted to teaching the child in his own language if the school is to connect him to his community and give him a solid foundation upon which to build English mastery in later years.

Current Government Involvement

13.7 One of the key institutions is the Institute of Adult Education which has wide-ranging functions and responsibilities, and very limited staff. With 35 professionals, it runs ten regional and two district "workers colleges" largely used to provide second-chance formal education to those who have dropped out of or failed in the formal system. Evening courses and correspondence notes are provided to those already working. There is a fee of \$8,000 per year. Currently there are high rates of dropout. Such second-chance education will certainly have to be a part of any new strategy for non-formal education. Although these "workers colleges" take up a great deal of the institute's personnel resources, the IAE is also involved in research, experimenting with different non-formal education approaches, training adult education personnel as part of the regular program of the university, and running short training courses, seminars, and conferences. The team felt that the IAE could play a useful role in starting a literacy campaign. Although it agreed that second-chance formal education was an integral part of any literacy strategy, the team wondered whether this was an appropriate use of the talents of the staff of the Institute.

13.8 The National Service Secretariat has over 13,000 servicemen and women, of whom about 3,000 are graduates. These personnel are supposed to serve the people for a year after "A" level and for a further year after graduating. Currently a group of service personnel have been gathering socioeconomic data on clusters of villages in 15 districts in preparation for the mounting of literacy campaigns in these villages, and the Secretariat would be willing to allocate many more service personnel to literacy work if needed. It is suggested that if the National Service scheme is to really play a role in bridging the gap between rural and urban areas and in promoting community development and literacy, all service personnel should be posted to

villages. This would then provide an army of 13,000 village-based development workers. For such a scheme to become effective there will have to be intensive training for all personnel.

13.9 Until recently the MOEC has only been on the periphery of adult literacy work (except that the BGL and the NSS currently belong to the Ministry). However, according to PNDC Decree 42, all education from preschool to adult should fall under the Ministry. Thus in 1987 a Department of Non-Formal Education (DNFE) was created in the Ministry, and a coordinator and three professional staff were appointed. No operating budgets or additional staff were allocated in 1988. The MOEC, with the 150,000 staff of GES, represents the largest human resource that could be used for a literacy campaign. It also has a structure that, hopefully, will be mobilized eventually to supervise and inspect schools, and could thus also be used to inspect adult classes. However, up to now there have been no attempts to draw on these GES resources. The DNFE continues to struggle on with its own staff, dealing not only with adult literacy, but also with other aspects of adult education (e.g., skill training through ICCES). Theoretically the DNFE is only supposed to coordinate the activities of other agencies, but many of these resent the creation of a new organization for this purpose.

Church Involvement

13.10 The most active players in adult literacy work are the churches. Considerably more than half of the 40,000 adults currently participating in all adult literacy programs are in church-run courses. The Jehovah Witnesses' "Watchtower" organization has recently reprinted all the 1950s literacy materials for their own use. The Ghana Institute of Linguistics and Bible Studies is the only organization that has been producing literacy materials continuously over the past few years. They now have a graded series of up to twenty booklets in a range of northern languages, and provide these free to evangelical Protestant sects. Obviously in any literacy campaign religious groups should be involved.

Coordinating Literacy Efforts

13.11 The Ghana National Council for Adult Education (GNCAE) was set up to coordinate all adult literacy and education activities in the country. In many respects it can be considered as a front organization of the IAE, as both the president and the secretary are from the Institute. Currently the GNCAE represents Ghana in most international organizations relating to literacy, publishes a regular newsletter, holds conferences to develop literacy strategies, and generally carries out informally the type of coordination work the new directorate in the Ministry is supposed to be carrying out. There is thus quite naturally considerable conflict between the GNCAE and the DNFE. Although many of those from Government and church groups are members of GNCAE, there is no directory or inventory of organizations involved in literacy work, or of literacy programs. This should be a priority for the council.

13.12 It is clear that the cooperation and coordination of all these organizations will be very difficult as conflicts and turf battles exist among the different agencies. The team was surprised, for example, that few organizations had kind things to say about any of the others, and few were

prepared to pool their resources, either physical or personal, for the common good. It would seem that the Ministry will have to take on a more direct responsibility than mere coordination, and to draw on the resources of these other groups by paying for the various services rendered. This will require that the DNFE have an adequate budget.

13.13 Finally, the team was surprised that there was no evidence of either agricultural or rural development projects incorporating literacy work as an integral part of their programs. It is difficult to see how a permanent technological breakthrough can be made by these projects without changing the perception of reality, the skills, the knowledge, and the attitudes of farmers through functional literacy.

Chapter 14

Preparing for a Functional Literacy Campaign

14.1 More than 30 years after independence Ghana continues to have high rates of illiteracy. According to the preliminary findings of the Ghana Living Standards Survey in 1988 the literacy situation was as follows:

Adult Literacy and Numeracy Rates 1988

	Accra	Other Cities	Rural	All
Can Read	66.5%	35.1%	21.9%	28.7%
Can Write	55.8%	32.4%	20.5%	26.2%
Can Do Arith.	71.5%	46.5%	33.7%	39.8%

The GLSS data also show that the majority of children who left school after Grade 6 either never were literate or have lapsed into illiteracy. This emphasizes the importance of combining post-literacy activities and materials provision as an integral part of any literacy program either for adults or children.

Prerequisites

14.2 A mass literacy campaign is only feasible in situations where the eradication of illiteracy is seen to be a national priority, there is high-level political support for the campaign, and this support is accompanied by a large injection of personnel and financial resources. Unfortunately neither the potential support nor the resources are yet available in Ghana. There are currently around 5 million adult illiterates in Ghana. If 80-90% of this illiteracy is to be eliminated over a five-year period, around one million adults would have to be taught, and consequently about 50,000 literacy facilitators or teachers would be needed each year. In addition about \$1,500 million would be required annually, of which part could be expected from PAMSCAD and other donor programs, but the bulk of which would have to come from Government.

14.3 Any initial functional literacy program must be taught either in the learner's mother tongue or in another language in which he is already completely fluent. An initial functional literacy program cannot at one and the same time teach a foreign language and teach literacy. Thus in Ghana literacy materials will have to be developed in a large number of different languages, probably even more than the 11 used in the 1950s campaign. In addition it is essential that any literacy materials relate closely to the life and reality of the learner. Thus there will have to be variations among the different ecological zones as well as between urban and rural areas. Finally, if special literacy programs are to be organized for out-of-school children, the content and methods will again have to be different. The development of materials can be simplified if a loose leaf format is used, with appropriate lesson sheets included in the package for learners in a particular place.

14.4 To add a new form of communication -- the written word -- to a traditional society where oral communication has dominated for centuries involves a dramatic change in the culture. To hope that a literacy campaign will also result in a conscientization of the people and their involvement in action to improve their lives involves even a more significant change. If any literacy program is only making a few people literate in a particular community they are likely to be swamped by the illiterates and rapidly lapse into illiteracy. It is thus essential that any campaign concentrate on particular geographical areas until virtually all people in these areas are made literate, and the foundation of a literate environment created.

14.5 The motivation of learners is crucial in any literacy program. Motivation can be kept at a high level if:

- literacy materials are produced on a loose leaf format, with one page distributed at each class. Not only will the participant want to attend to receive the lesson, but also he will see his knowledge grow (in his file) day by day.
- the themes of the program relate to what is possible with a small effort on the part of the learner, and thus help him take action to improve his life and livelihood.
- the action that the learner wants to take is not hindered by a lack of the necessary inputs. If, for example, participants decide to plant new high-yielding varieties of seeds, and these are not available, they will soon become disillusioned and drop out.
- the organization of the classes does not inadvertently discriminate against particular groups. For example, it might be necessary to have separate classes for men and women, either for cultural reasons, or because men might be inclined to drop out if the women outperform them.
- participation in the literacy class must be seen as the first step in a process of continuing education. For example the basic literacy class should be followed by advanced classes in English, and these in turn followed by part-time evening JSS and SS classes.

Organization

14.6 The team felt that it would be impossible to mount a mass literacy campaign if participation in all the essential preparatory activities by organizations such as the BGL, IAE, or CDD continue on a voluntary or ad-hoc basis. It is thus essential for DNFE to be considerably strengthened through the addition within the next 12 months of at least another 15-20 professional staff. More importantly all budgets needed to finance the preparatory work for this campaign must be channelled through the DNFE. In fiscal year 1989 about \$250 million will be required. The Department will thus be able to pay for the required support from the different Governmental organizations involved, not just request such support. It is important that the organizations contracted to provide services be made accountable, with strict penalties imposed for late delivery or non-delivery.

14.7 The team believes that the DNFE is the appropriate organization for the overall control of the program, since the BGL, NSS, and GES fall directly under the MOEC, providing by far the largest resource pool. However, since the literacy campaign must be seen as a national endeavor and not merely the plan of one organization, a National Implementation Committee (NIC) should be formed, with members drawn from the PNDC, all major developmental ministries with outreach activities, major national churches and NGOs, major literacy organizations, GES, and the Ministry of Finance and Economic Planning. The NIC should have overall authority for policy, theme setting, coordination, resource mobilization, and evaluation. There should also be District Implementation Committees, involved largely in mobilizing all possible resources (especially human resources) for implementation.

14.8 In terms of particular activities, DNFE would contract the NSS and IAE to carry out background "knowledge, attitudes and practice" (KAP) studies, and the BGL to prepare verbal hierarchies (from the simple/common words to the complex/rare words) for each language. DNFE would identify the main themes to be covered in the campaign and prepare the illustrations and photographs to be used in the loose leaf materials. The IAE would be commissioned to train the materials developers in the different languages, and the BGL to chair each of the literacy material development panels. The DCD, with assistance from church groups, would be responsible for all aspects of training facilitators, including the development of manuals for the training programs and the actual training. For this some rehabilitation of the DCD's training centers will be essential. The GBC will be charged with producing radio broadcasts, both to support the organization of the campaign and to support the campaign themes (see Chapter 13). Finally, it is proposed that regular program supervision be carried out by GES circuit officers, who would in this case report to District Community Development Officers (or even a new District Non-Formal Education Coordinator under DNFE). The IAE would be commissioned to carry out periodic monitoring reports. It should be noted that the DNFE will have no regional or districts arms, but will work through other agencies.

Materials Development

14.9 The materials and approach, including facilitator training, must be tested on a small scale and evaluated. This could be done in 1989/90 if rapid progress is made in staffing DNFE and developing materials. Pilot

implementation activities should take place in 1990/91 to iron out any other major difficulties before national implementation begins in 1991/92. National implementation should begin only if materials have been developed, tested, and mass-produced. The first-year pilot program is already being developed by the NSS in Frafra (for Bolgatanga), Fante (for Apam), and English (for Techiman and Atebubu Towns and for Tema and Suame Magazines), all of which would be supported by FM radio. In the second year there would be widespread implementation of these three clusters, and materials in other languages would be tested in 450 villages in 45 clusters in the 15 districts with special Primary Health Care campaigns. National implementation is planned to start in the third year. Any functional literacy campaign should be designed to be run during the slack working season. In rural areas this is usually December to March, and for seasonal informal urban activities from June to October.

Costs and Finance

14.10 The DNFE will be responsible through MOEC channels for the actual production and distribution of materials, but the DCD will control the budgets for field implementation. Any organization, either governmental or non-governmental, will be able to run literacy classes using literacy materials provided by Government at a subsidized price, as long as the facilitator has been trained in one of the special DCD training programs. Thus, for example, the staff of an irrigation project could run the functional literacy classes and be provided materials, but only when this staff have been trained in methods of literacy teaching. All classes will at the outset be provided with sufficient materials for only 20 students. Classes run by Government agencies will also be provided with chalk, kerosene, and other essential supplies.

14.11 The team suggested that participants be charged a nominal fee of about ₵100 at the outset of the program, partly in order to help ensure that they will demand regular attendance from their teacher, but also to finance certain small miscellaneous items needed by the class for their development activities. It is estimated that the total cost per student to be borne by Government, or by Government with another sponsoring agency, will be about ₵1500 per student. Even in programs run by a non-governmental organization at least ₵1,100 per student will still have to be borne by Government.

14.12 The team felt that literacy teachers (facilitators) should not be paid a salary or regular allowance for teaching the literacy class, even though this will involve them for 90 minutes a day over a four- to six-month period. However, it was agreed that a reward structure should be developed to induce facilitators to take their work seriously. It is proposed that a "payment by results" system be developed that to provide the facilitator with non-financial rewards such as books, cutlasses, or even radios when he can prove that he has been running the class regularly, that a certain number of participants have become literate and, most important all that there is verifiable evidence that the participants have been involved in community development activities (e.g., latrines constructed, trees planted, etc).

Creating a Literate Environment

14.13 "A skill not used is rapidly forgotten." This applies as much to literacy skills as to any other skill. During field visits the team saw few

libraries or even library boxes, and even English language newspapers and books did not seem to reach the rural areas. Apart from bibles, virtually no printed materials in national languages of any kind were found. The sizeable investment proposed of \$1,500 million per year will be wasted, as will the much larger investment in basic education, if no attempts are made to create a literate environment, especially in the national languages. It is thus recommended that everywhere a literacy class is held the participants be mobilized to construct a village reading center, or at the very least a place where a library box can be kept and from which books can be borrowed. It will be necessary to prepare, publish, produce and distribute a range of printed materials in all the languages in which the literacy campaign is run, and ensure that they can be easily read by new literates; they must also be ready at the time the adult completes his literacy course. The BGL should be responsible for the development and production of these materials but should also commission development from the private sector.

14.14 It has been mentioned that any massive functional literacy program should be the first step in a series of continuing education programs run in the evenings, using formal school teachers and schools. Once a person achieves literacy in his own language he can progress to a program in English. This would then entitle him to enter a program equivalent to JSS, which would in turn qualify him for a SSS course. As is now the case with such second-chance courses run by the Workers College under IAE, participants would be charged a fee to cover costs. Eventually there should be multiple entry points from the non-formal to the formal system.

14.15 It is clear that if a real impact is to be made on informal sector productivity, literacy rates must increase dramatically. But it is also clear that this is not an easy task that will require political support, human and financial resources, and a commitment to implement all components of an integrated strategy. The team supports such a functional literacy campaign, especially since it will likely increase the pressure for effective primary education and thus an increase in intakes and retention. But we caution against attempting such an ambitious program unless there are assurances that resources will be provided and that the political support will be forthcoming.

PART V
A STRATEGY FOR INFORMAL SECTOR EMPLOYMENT CREATION AND
RURAL DEVELOPMENT FOR BASIC EDUCATION

Chapter 15

A Strategy for Basic Education and Training for
Productive Self-Employment

Promoting Literacy and Numeracy

15.1 For education and training to have an impact on promoting productive self-employment, many of the initiatives discussed in the main body

of the report will have to be implemented in an integrated fashion. This does not mean, however, that all programs can be implemented simultaneously as resource scarcities, institutional and other factors have to be taken into consideration. In this chapter the linkages of the various programs that together make an integrated strategy are shown, while proposals for the phasing of some of the major initiatives are discussed in Chapter 16.

15.2 The evidence from Ghana and other developing nations suggests very strongly that literacy and numeracy are necessary preconditions for increasing agricultural and informal sector productivity. Studies show that literate farmers are about 8% more productive than illiterate farmers. In many societies this increased productivity is offset by a migration of educated youth to unemployment or low productivity employment in the towns, but in Ghana over recent years, this migration has slowed down considerably and in some cases even reversed. Currently about 70% of the adult population is illiterate. Thus the first part of any strategy to increase rural and informal sector productivity must be to dramatically increase literacy rates. This strategy can be achieved by:

- ensuring that children who have attended school for at least six years are functionally literate and numerate;
- increasing significantly primary intake and enrollment ratios;
- mounting massive functional literacy campaigns, and;
- creating a literate environment so that literacy once learned is not forgotten.

15.3 Currently a significant proportion of children, particularly those in the more remote areas, are reaching Grade 6 only partially literate at best, and completely illiterate at worst. In order to help solve this problem the team proposes first and foremost that teachers be made accountable to the local communities for the achievements of the children in their schools. From August 1990 a simple standardized achievement test should be administered to all Grade 6 students and the ranking of schools according to these tests widely publicized. If scores remain low for three years, government subventions to the school might be withdrawn. Second, each year during the next three years all basic education teachers should receive at least two weeks of residential inservice teacher training. Ten of the existing teacher training colleges should be turned over to become inservice training centers for primary and JSS teachers. In addition, as soon as possible all untrained pupil teachers should be eliminated from the rolls.

15.4 Third, an attempt must be made to produce and transmit interesting and effective school broadcasts to help upgrade the technical skills and motivation of teachers, but also to make classroom instruction more entertaining. For this to happen radio producers will have to be trained, all air time available for in-school purposes used for basic education, and over the next few years a limited number of high quality programs produced and broadcast and the necessary support materials developed. Fourth, the monitoring and inspection of basic education schools must be intensified and made more effective. At the outset the circuit officer must be contractually

obliged to make a detailed inspection visit (with full written reports) to all schools in his cluster at least five times during the academic year. Lastly, children must continue to have access to textbooks and other learning aids.

15.5 Intake and retention ratios in basic education depend to a considerable extent on what is happening in the schools. If there are dedicated teachers, if textbooks and other learning materials are available, and if parents see that children are in fact learning something, enrollments are likely to increase rapidly. Such an increase can take place with only a marginal increase in total costs, as currently pupil/teacher ratios at the primary level are only 23:1, whereas a ratio of 35:1 or higher is not uncommon in other African countries. If, however, teachers attend school irregularly and make the school children work on their private farms, if there are no instructional materials, and if parents see their children gaining little from their education, then intakes and enrollments are not likely to increase.

15.6 Currently primary school enrollments are growing much slower than school-age population (0.8% increase from 1986/87 to 1987/88). A substantial effort will be required to improve the effectiveness and relevance of primary education if in the long run the proportion of young people remaining illiterate is not to grow. It is not so much a question of exhorting children to enter and stay in school, but a question of making the school attractive and worth the opportunity cost of attending. One essential precondition is that the policy of teaching children during their first three years in school in their mother tongue is supported with the necessary materials and inservice training of teachers, and strictly enforced, so that the child does not feel that the school is alien to his home environment. A more integrated and relevant primary curriculum would also help in this respect.

15.7 At present not more than 25% to 30% of the adult population can be reached rapidly and easily with developmental and technical messages which could help them increase productivity. Not more than 30% of adults are literate, and only around 25% of households own radio sets (many of which might not be functioning). It is proposed that detailed preparation for a mass, action-oriented functional literacy campaign start, the approach be tested in the autumn of 1989, tested again on a larger scale in 1990, and implemented on a campaign basis nationwide at the end of 1991. The preparation and testing of literacy materials in at least 11 languages will require substantial staff and budgets being provided to the MOEC. At least 20 key staff, supported by short-term consultants, are immediately required to catalyze the activities of Ghanaians in a wide range of governmental and non-governmental organizations.

15.8 A budget of around \$100 million (from governmental and donor sources) has been provided in 1989, and must rise to around \$1,500 million by 1991. It has been estimated that the unit cost for a four- to six-month course, held for 90 minutes each evening, will be around \$1,500. Even when the facilitator is working as a volunteer, as is envisioned, very substantial resources are required if the mass literacy campaign is to have an impact. Already the British Overseas Development Administration is committed to supporting the pilot phase of this program.

15.9 For the campaign to have a real impact on productivity it will have to aim not only to produce literacy, but also to change the way the participant looks at his own reality in his household and as a farmer or informal sector artisan. Also, the themes of the campaign will have to be closely related to what is possible, and to what development inputs and credit are available. Radio will also have a key role to play in the campaign.

15.10 Literacy, like any skill, can only be retained if it is used. Thus the campaign will have to be accompanied by the production and distribution of newspapers in national languages and the development and production of large numbers of books and pamphlets both for entertainment and development purposes.

Skills for Productive Employment

15.11 The second part of any strategy involves providing young people with the skills that they will need for productive self-employment. This can be achieved by:

- ensuring that JSS creates a familiarity with tools and also a manual dexterity;
- ensuring that JSS transmits basic modern farming skills;
- radically reforming post-basic-level artisanal training, so that a central role is played by master craftsmen, supported by NVTI centers and GES technical institutes.

15.12 For productivity in agriculture and the informal urban sector to increase, new entrants to the labor force will need to have some knowledge and skills in agriculture, some business skills, a familiarity with tools, and a manual dexterity. The only way most youth can gain these skills, attitudes, and knowledge is through basic education. This is one of the main objectives of the new JSS system. JSS has great potential, but it will only be realized if the teachers responsible for agriculture, vocational, and technical skills are adequately trained and have the necessary technical support. It is thus considered essential that all teachers of JSS practical subjects receive four weeks per year of intensive inservice training over the next three years, designed to train them in how to teach the particular program in that year. They will also need to be provided with detailed lesson-by-lesson plans, and in addition should be given free a copy of a bi-monthly teachers journal.

15.13 The teacher, however well-trained, will not be able to achieve the objectives of JSS without support from both the community and other government development agents. It is proposed that the agricultural extension agent be instructed to assist the schools in creating and maintaining effective demonstration plots. It is also recommended that a special booklet entitled "This is Your School" be produced and distributed to all community leaders. This booklet, combined with frequent radio broadcasts, will explain what communities must do to ensure the success of their JSS -- from providing raw materials to monitoring the attendance of the teacher and students.

15.14 About 30% of JSS graduates will proceed to some form of senior secondary education. As at JSS, efforts should be made at this level to avoid the esoteric and not very useful academic subjects, and have a strong bias towards the teaching of relevant practical skills and knowledge and their application. However, the majority of JSS leavers will end up in farming or in other informal sector employment. Those in farming should be encouraged to join or form cooperatives, so that eventually they will be in a stronger position to obtain inputs, credit and extension advice. Those who end up in the urban informal sector (perhaps as many as 40,000 per year) will not immediately have marketable skills, and thus will require further informal and formal training before they will be able to be productively employed. For this to happen there will have to be a radical reorientation of the whole system of skill training.

15.15 Currently there are more than 40 governmental post-JSS technical and vocational training institutes preparing youth for formal employment in a modern industrial sector that does not exist. This often leads to defeated aspirations and expectations, and long periods of unemployment or unproductive employment. Meanwhile most of the productively-employed have gained their skills through informal sector apprenticeships. It is proposed that the functions of both the NVTI and the GES technical institutes be radically changed. NVTI should concentrate on trades testing (replacing the City and Guilds), syllabus and curriculum development, and most important, the training of masters of apprentices. The GES technical institutes should stop all their three- and four-year courses, and instead run one-year (or shorter) courses for youth who have been apprentices for at least two years. These one-year courses would concentrate on theory, simple business practices, and practical training in particularly complex or delicate operations.

15.16 In other words, the whole of the middle-level skill training network should be reformed so that it concentrates on preparing youth for the informal sector opportunities that do exist. With the proper incentives, up to 30,000 young people a year could pass through this new system and gain useful skills more rapidly than has been the case in the past -- thanks to their orientation in JSS, the training of their masters, and the optimum use of the skills training capacity that exists.

Positive Environment for Informal Sector Employment

15.17 The third part of the strategy must be to create the right environment for productive and informal sector employment. A young person cannot set himself up productively in an informal sector operation unless he has access to tools and raw materials, and unless the political environment encourages informal sector endeavors. By far the most difficult problem to solve is access to credit to purchase tools and raw materials. As little as \$150 to \$300 of initial seed capital would enable a young person who has passed through an informal apprenticeship to buy a set of essential tools and enough raw materials for his or her first few jobs. It is proposed that informal sector artisans, especially youth, be helped to establish neighborhood trade associations or cooperatives, and communally-guaranteed loans be provided to new entrants through such facilities as the rural finance project or the private small and medium enterprise development project. It will also be necessary for Government to actively encourage informal sector

enterprise and stop the activities of bodies such as the Accra Traffic and Sanitation Task Force, which drives informal sector workers from the streets as if they were pariahs.

Chapter 16

Phasing of Implementation

16.1 Though the team has presented an integrated program, all elements which will have to be implemented if education is to play a key role in ending informal sector employment, neither the strategy outlined in Chapter above nor the more detailed proposals included in the main body of the report can be implemented simultaneously. Some of the proposals are easier to implement, and some are likely to have a greater impact than others. The team made over 40 different recommendations ranging from the very simple (changing the title of the agricultural science course) to the very complex (developing a mass, action-oriented functional literacy campaign). These recommendations can be grouped under six main headings:

- Improving the effectiveness of basic education in imparting cognitive and manual skills.
- Establishing effective educational radio for improving the skills of teachers and the effectiveness of basic education.
- Maintaining a literate environment in rural areas.
- Maintaining a massive, action-oriented functional literacy program with radio support.
- Reforming NVTI, public technical and vocational training, and the system of support for informal apprenticeship schemes.
- Providing small amounts of credit for recently trained informal sector workers.

16.2 As some work has started in all these areas, we are not suggesting that ongoing work should stop, but merely proposing where personnel and financial resources should be concentrated in each of the next five years.

16.3 Some of the recommendations require little more than a policy decision and decree to be implemented. For example, synchronizing the term time and vacations in the North of the country with the farming season there; or changing the title of the "agricultural science" course to "farming skills." Others require a decision or decree with some follow-up monitoring, such as a decision that schools should be open for a minimum number of days a year (making up for time lost due to funerals); or a decision that there should be interdenominational division of responsibilities for running schools in particular areas. A further category require considerable technical inputs but little finance, such as changing at least ten teacher training colleges into inservice training centers. The final category, including many of the most significant proposals, require both financial and technical inputs.

Though the first two categories are relatively easy to implement, they cannot be implemented in isolation from some of the more complex items since each of the main program areas form an integrated package.

16.4 In establishing priorities it will be necessary to take into account other factors, including costs, manpower, and institutional considerations, as well as phasing and any guidance that can be gained from similar experiences in other countries.

Cost Implications

16.5 The majority of the programs proposed in this report involve only marginal increases in costs. In addition, the provision of many of the inputs emphasized (e.g., texts and exercise books for basic education) has already begun, and thus all that is required is a continuation of existing levels of finance rather than any additional resources. MOEC's present recurrent budget is ₦43.5 billion. In constant 1989 prices this might reach about ₦52 billion by 1993, when it is hoped that the strategies and programs proposed will be fully implemented. The total additional cost of the program in 1993 is likely to be ₦2,540 million (in 1989 constant prices) or about 4.8% of available budgets. This is broken down as follows:

-	Improving basic education	₦ 600 million
-	Radio broadcasting for school education	₦ 180 million
-	Literacy programs (with radio support)	₦1,500 million
-	Maintaining a literate environment	₦ 100 million
-	Reform of vocational and skill training	₦ 160 million
	TOTAL	₦2,540 million

16.6 In fact the charge on the budget of the total reform package proposed could be very marginal, as the non-renewal of the contracts of up to 20,000 untrained and unneeded teachers at the primary level is likely to save over ₦2 billion, and already identified foreign aid inflows for various project elements will provide at least a further ₦500 million.

Manpower Constraints

16.7 Though finance is not a major problem for implementing the proposed reform program, manpower scarcities will create serious constraints. This is because all the proposals are management-intensive, and almost all require considerable technical manpower. To change the functions of a teacher training college or a technical school might not involve any additional expenditure, but would require leadership resources to ensure that those involved in the existing programs are ready to accept the changes, and also a key group of professionals to design and test the new programs as well as train involved staff to implement them. The most important consideration is likely to be the availability of technical and managerial manpower in the right place and the right time.

Institutional Considerations

16.8 Two points have been taken into account. First, it is easier to implement a program that involves a single ministry rather than two or more ministries. Thus it will be easier to introduce an effective monitoring system for basic education within MOEC than to involve agricultural extension agents in reinforcing school demonstration plot programs. Second, the hardest programs of all to implement are those that involve turf questions between ministries. Thus it will be difficult to reorient the functions of the technical institutes (under the MOEC) and of NVTI (under the Ministry of Mobilization and Social Welfare). This by no means obviates the importance of the proposed reform.

Similar Experiences

16.9 A final factor that has been considered in establishing priorities is relevant experience with similar initiatives either from Ghana, other African countries, or countries at a similar level of development. There is strong evidence from all over Africa that providing children with access to textbooks has a significant impact on cognitive achievement. There is little indication that pupil achievement is linked to the formal qualifications of teachers, but considerable evidence that frequent inspection of schools combined with inservice teacher training does improve pupil achievement. Further, there is little experience from post-colonial Africa suggesting that schools can run efficient school farms. In the colonial period in many countries, although basic-level schools were made largely self-financing through school farms, this tended to alienate the population, who were concerned that students were being used as unpaid laborers.

16.10 Of all the major initiatives proposed in the report, educational radio broadcasting has had the greatest success in Africa. Its strength has been demonstrated in particular for enrichment of classroom learning -- such as the Radio Language Arts Project in Kenya -- or for training teachers as a part of a package approach (with correspondence materials and contact sessions) as was done in a program in Tanzania.

16.11 Though functional literacy has not been extremely successful in Africa, the Ghanaian program of the 1950s and the Tanzanian program of the 1970s are exceptions. Effective literacy programs require a high degree of political motivation and strong managerial skills, even in linguistically homogenous societies. Problems increase dramatically in multilingual cultures. There are few if any success stories of multilingual literacy teaching in Africa.

16.12 Similarly, efforts to maintain a literate environment in multilingual societies in sub-Saharan Africa have had little success. Mobile libraries, library boxes, and rural newspapers have all so far had a very limited effective life. However church-based organizations such as the Institute of Linguistics and Bible Studies have developed a literature in a range of languages in several African countries, and the simple Village Reading Center model developed in Nepal and Thailand has provided a framework for maintaining literacy in Asia.

16.13 The suggested role for NVTI is similar to the model that exists in many francophone African countries (e.g., Organisation National de Formation Professionel). However these organizations tend to concentrate the bulk of their resources on supporting training for the modern sector. The Nigerian National Directorate of Employment is one of the few African organizations involved in encouraging enterprises, both large and small, to take on additional apprentices, but it is too early to say whether it is successful.

16.14 Finally, there are no large-scale programs for providing small amounts of credit to artisans in the informal sector who have recently graduated from apprenticeship training. In several countries, however, training institutes themselves do provide credit on a small scale, and some of these schemes are successful.

Phasing

16.15 On the basis of these factors and an implementation period lasting from now through to the end of the educational reform period (end 1993), the team suggests that the MOEC should take immediate, high-priority action to revamp the educational broadcasting system in Ghana and ensure that at least four good series are ready for the start of the 1989/90 academic year. For these series, teachers would need to be trained and supporting materials developed and distributed. Throughout the period 1989 - 1993, new series should be developed and implemented. This program becomes all the more urgent as radios have already been procured and distributed to all basic schools.

16.16 The second step in the strategy is implementation of the other actions designed to improve basic education. Early in the 1989/90 academic year a new monitoring and inspection process should be in force, and the staff of the teacher training colleges selected for inservice training should themselves have been trained. By January 1990 all the reforms proposed for basic education should be in place.

16.17 The first nine months of 1990 should be devoted to preparing for the absorption and training of JSS leavers for rural and informal urban sector employment. During this initial period no attempt will be made to change dramatically the functions of NVTI. This should only start once the new informal training strategies are in place, probably not until early 1992.

16.18 Most of 1991 should be devoted to taking lessons learned from the first two years of the ODA-supported literacy program and preparing for the first mass literacy campaign, to start in late 1991. The period 1992-1995 should also be devoted to massive implementation of the functional literacy program. The latter part of 1992 and 1993 should be devoted to preparing large quantities of post-literacy materials in all languages in which literacy is to be taught.

16.19 Finally, Government should begin working on providing small amounts of credit to informal sector artisans who have been trained through a combination of apprenticeship and short formal training from the second half of 1993.

Conclusion

16.20 As mentioned above the marginal costs of the program proposed are small, and if the contracts of 20,000 unqualified, untrained pupil teachers are not renewed the program's cost to Government will be even smaller. In addition, considerable external assistance is likely to be available to support parts of this strategy, including (a) the provision of paper by the Canadian Government, (b) support for functional literacy from the British Government (through PAMSCAD), which would be used for a major primary education development program, and (c) World Bank funds to continue the broadening and deepening of the educational reforms. It is thus not so much the financial constraint that will prevent the implementation of the strategy, but the lack of an awareness of the current development realities and, when this awareness exists, a lack of sufficient institutional strength to fight against vested interests that are preventing change.

16.21 The facts are clear. Only 16% (this proportion is falling) of the labor force is employed in the formal sector, and of these only about one-third are employed in productive enterprises. Further, 84% or more of new entrants to the labor force will inevitably have to find their livelihood in the informal sector. This report has made some suggestions as to how the education and training system can be changed and strengthened so that it ensures that this 84% can substantially increase their productivity. While it is easy to make suggestions, it is difficult to implement them, especially when they challenge past wisdom and practices. Nevertheless, if Ghana is to continue to develop, structural adjustments are needed as much in peoples' attitudes and skills as in the country's economic framework. Macroeconomic changes can only have a lasting impact if people with the right backgrounds and attitudes are there to take advantage of the opportunities they provide.

Institutions Visited

Volta, Eastern, Ashanti Regions

1. Nnudu-Aboasa Junior Secondary School. There are 41 students, two trained teachers, and three National Service men and women in this school. The headmaster is concerned that there is no one trained to teach carpentry, masonry, or home science. The school has received textbooks, tools and materials, but has the teachers' guide for mathematics only. The workshop is under construction. Members of four villages have contributed to the building program; males resident in the villages have paid 1000 cedis, resident females have contributed 800 cedis, and village members who live elsewhere have been charged 2000 cedis/male and 500 cedis/female. Although the school has collected 154,000 cedis and the community has provided labor willingly, it is not certain that the total amount of approximately 1.5 million cedis can be raised. There is a nice flower garden and a two-acre farm, but there is no fertilizer and there are no livestock. Students' level of English is low; English is taught from grade one in the two primary schools that feed this JSS.

2. Tsito JSS. This experimental JSS has five classrooms, two of which are new. Average class size is 50 students, and there are 12 teachers, six of whom are trained. Textbooks have been received, but there is an insufficient supply of general science equipment. The school is offering woodwork, metalwork, catering and dressmaking. There is a sufficient supply of tools for woodwork, but tools and equipment are lacking for metalwork and catering. There are five sewing machines for dressmaking. There are also some tools provided by the GDR, but these are of poor quality. The community is providing labor to convert a classroom into a workshop, but has not contributed financially. There is a school garden in which cow peas are grown. The school farm is located over two miles from the school, so students go only once every two weeks; the farm made a small profit last year. The assistant headmaster is pleased about the new JSS curriculum because he believes it will give students broader preparation, and likes the attention JSS has received from Government and inspection officers. He was concerned, however, that the level of English proficiency is extremely low. Graduating students receive employment counseling from the regional education office, as well as from the teaching staff at the school.

3. Department of Extramural Studies, Institute of Adult Education, Ho. There were no staff in the office other than a clerk who provided the following information. Three types of course are offered: formal education, nonformal education, and literacy. Formal education classes provide remedial instruction at GCE, O, and A levels. There is currently no center, but the R.C. Girls Primary School is being used while a site is being developed. Students take their examinations in Accra. Nonformal education includes one-day seminars for prison officers, police, bee keepers and poultry farmers. Literacy courses have been offered since 1987. They involve one-week training courses for literacy facilitators at a cost of cedi 2,000. Literacy training is centered in the R.C. and E.P. churches.

4. E.P. Teachers Training College, Amedzofe. This Group II college has 20 teaching and 63 non-teaching staff (eight nonteaching staff have been redeployed), and 332 students; it was constructed to serve 120 students. By mid-August 1988 JSS course syllabi and textbooks had not been received. In addition, the college had not yet received equipment or tutors to teach any vocational/life skills other than home science. The college has not been inspected in over two years. Government grants arrive very late, causing the college to restrict certain activities. The principal is very concerned that post-secondary applicants do not have a sufficiently high level of proficiency in English and mathematics. If the college adheres to the official entrance standards it will not be able to admit the full complement of 80 teacher trainees in September 1988. Although the principal supports the objectives of the new JSS, he fears that the scope of the curriculum exceeds the available professional and physical resources needed to do the job.

5. Gbi-Wegbe E.P. JSS. This school is headed by an able, experienced headmaster, who is assisted by two trained teachers and one National Serviceman (there are two other trained teachers in the middle school). Carpentry and masonry are taught by one teacher, dressmaking and catering by another. French and English are taught by the National Serviceman. The school was well-maintained and appeared to be functioning well. A four-acre school farm is operating, and students have individual plots that they work in on their own time. There is no school garden. Additional instructional inputs such as maps and musical instruments have been provided by the Church. A radio has been donated by someone from the town and is being used to teach French. Although there is growing support for the practical thrust of the new JSS, community support for workshop construction has been hampered by a chieftaincy dispute.

6. Frankadua JSS/Middle School. Last year this school had 63 JSS students and seven teachers (one of whom was shared with the middle school). By year's end the class size had fallen to 51, due either to a refusal to pay school fees or lack of interest. Teachers complain that students have difficulty writing and speaking English (primary school is taught in English from Grade one). JSS textbooks and tools have been received, but the tools for technical and vocational/life skills teaching are being kept locked up until new teachers arrive and the workshop is ready. Expected profits from the school farm will be used to supplement the supply of agricultural tools. The community is very supportive of this school, but is operating on the assumption that it must construct three new workshops rather than one. The chief has divided community members into three groups of 100, each of which works one day per week to construct the "first" JSS workshop under the direction of the CDR. In addition to their labor, community members have contributed 200 cedis per person as well as tools and materials.

7. Somanya Catholic JSS. There was only limited evidence that the JSS program is being implemented in this school. The one cluster C teacher is untrained and has been teaching only carpentry and technical drawing. The rest of the cluster C subjects are not yet being taught. The headmaster demonstrated some degree of misunderstanding of the new curriculum (he would like to teach electrical installation and automechanics). JSS enrollments dropped from 45 to 37 over the course of the school year. There are three JSS teachers in addition to the headmaster, who is responsible for the adjoining

middle and primary schools as well. Lower primary education is taught in the local language, with English offered as a subject. A recently-organized harvest produced 83,000 cedis for the renovation of a primary classroom to serve as the JSS workshop. A further fund-raising appeal was planned for the school's upcoming open day, at which the headmaster expected to get a positive response to his request for additional community support. Classrooms were barren and dark, but outdoor gardens were nicely kept.

8. Mampong Technical Teachers Training College. This college had been a three-year post-secondary training institution with a technical bias, whose graduates went to teach in the old junior secondary schools. Its curriculum included automechanics and electrical installation along with woodwork, masonry, and technical drawing. In line with the new JSS curriculum the college has stopped teaching automechanics and electrical installation and has added metalwork to its list of course offerings. The school can accommodate 210 students; there are currently 75 in the class to finish in 1989, 76 in the class of 1990, and approximately 60 in the class entering in Fall-1988 and finish in Spring-1991. As of mid-August there had been 85 applicants for those 60 slots. There are 14 instructors, including the principal. A number of campus construction projects such as a classroom block, student dormitories, and staff housing stand unfinished due to lack of funds. The college operates a consultancy service for woodwork and metalwork jobs; 40% of the profits go to those who worked on the project and the rest is used for maintenance of the college.

9. Boys Vocational Training Centre, Ho. This center, run by the Department of Social Welfare is attached to, but separate from, a remand center. Trades taught are masonry, carpentry, and agriculture (fitting is planned) and the courses are for three years. All trades are learned in the first year and one trade in years two and three. Entrants are middle school leavers or dropouts from middle schools. All must be able to read, write, and do numerical calculations. The dropout rate is very high. Out of an annual recruitment of 30, only 7 graduated (with NVTI Grade 2) in 1987 and 8 in 1988. The popularity of the program is said to be reduced due to the association with the remand center. Graduates are advised to work with a master for at least a year to become familiar with additional materials. It is also common for trainees to find employment with a contractor to raise the fees for more advanced courses. The Center attempts to acquire work contracts.

10. Alvango Trades Training Centre. The trades taught at this center, operated by the Episcopalian Church, are masonry, carpentry, catering and dressmaking. Courses are for four years following MSLC. The final examination is NVTI Grade 1. The initial intake to each course is 15 students. Current enrollment is 150 students implying high dropout rates, despite an initial applications:places ratio of over 3:1. Of the last graduating class of mason and carpenters, 30% proceeded to polytechnic courses. A production unit exists with five full time artisans and students work on contracts when they occur. Catering students are said to find jobs easily and masons and carpenters tend to find wage employment or group together as co-operatives.

11. Vocational Training Centre, Abetifi. Courses offered at this NVTI center are in dressmaking, carpentry masonry and plumbing. The 125 trainees are all MSLC holders, recruited directly by the Centre. The applicants:places ratio is again above 3:1. The objective is to train to NVTI full craft certificate standard (four years). In practice, only a minority stays so long since they can easily find employment after taking the lower grade tests. Fees have recently been increased from 1850 cedis a term to 2800 cedis. The initial intention (as with all NVTI centers) was to be part of a complete apprenticeship system involving block release from the employing firm. In practice it is very difficult to place students in firms and the normal situation now is a totally center-based course, using the production unit with external contracts as the work experience component.

12. Vocational Training Centre, Kumasi Magazine. Located in the middle of an area containing around 2,000 auto trade workshops, this NVTI center was originally intended to provide 12 weeks of theoretical training to apprentices of the surrounding masters. These courses ended in 1978 due to high rates of pilfering. The local office of the National Association of Garages is now planning to build a workshop which will be visited by instructors from the Centre. Trades offered are printing, automechanic, autoelectrical, autobody and industrial maintenance. There are reported to be 1,000 applications for around 60 places, mostly from outside Ashanti. Again the aim is to take sponsored apprentices who will then spend periods of time with their firms. In practice, apprentices are few and mainly from government organizations. The outside work training is, as a result, largely unstructured. Most trainees leave after gaining the Grade 2 certificate. Some then study at night schools. Employment is a mixture of formal sector jobs and the creation of co-operatives. Fees are 3000 cedis a year. Almost all equipment dates from the mid-1970s.

13. Opportunities Industrialisation Centre (OIC), Kumasi. This is one of the three OIC centres in Ghana. The target group of trainees is urban school dropouts and members of poor families. Courses offered are in carpentry, masonry, plumbing and office skills and last 15 months, including two months remedial maths and English and 3 months on-the-job training in large firms. The Centres pride themselves on the shortness of the courses which lead to NVTI Grade 2. Fifteen places are offered per course per year. Intake policy is first come, first served after interviews. Funding from OIC International ended 5 years ago. Today salaries are paid by Government and other revenues are raised from production and local fundraising. Job placement has been a major part of the whole scheme (with a full-time officer) but recently formal sector openings have reduced substantially. The major constraint on becoming self-employed is said to be the cost of tools (43,000 cedis) but subsequent earnings can be very large. Intakes are from the urban areas and there are no fees.

14. Integrated Community Centre for Employable Skills (ICCES), Tetrafu. This is one of the 17 full ICCES Centers operating in September 1988. The ICCES program grew out of the continuation schools and is core funded by UNICEF and supported by several volunteer agencies. The emphasis is on strong community support and continuing involvement, and centers are mainly located in areas other than the large towns. The Tetrafu Centre opened in 1986. The intake target for 1988 was 24 each in carpeting, masonry, and dressmaking. The Town Development Committee raised the finance for the

Centre's workshop buildings, announces courses, and selects trainees from eight surrounding villages. Ninety percent of the intake are middle form IV leavers. Courses are for two years and the standard is equivalent to NVTI Grade 2. Practical work is community-based. The expectation is that a production unit will be established - partly to provide contract work for graduates and partly to earn money for the Centre. Some concern was expressed regarding the current level of demand for trained labor in the area. Trainees are encouraged to continue farming.

15. Centre for Rural Industries, Kwamo. This Department of Social Welfare center runs courses in carpentry, masonry, automechanics, electrical appliances, plumbing, and agriculture to 140 trainees. Courses run for two years leading to NVTI Grade 2. Previously they ran for three years leading to Grade 1. Only MSLC holders and secondary school dropouts are admitted. The Centre has no permanent classrooms but does have workshops. There are only three full-time teachers but another three part-time ones (agricultural extension officer, primary school teacher and garage mechanic). Practical work is mainly found outside the Centre. Most of the trainees are from surrounding villages, not from the town itself. Of the graduates, some go on to polytechnic courses, plumbers are said to go to Kumasi and mason become self-employed locally. Their main problem is purchasing tools. Fees cover food and, where applicable, accommodations.

16. Youth Leadership Training Institute, Asankari. This Institute is one of four run by the National Youth Organising Committee. Two year courses are held in carpentry, masonry, agriculture, crop production, catering and dressmaking leading to NVTI Grade 2. Enrollments are 100 including 30 girls. No fees are charged. There are twice as many applicants as places and the selection process is rigorous. In addition to craft training, there is an emphasis on "leadership: and inter-personal skills. Units on accounting, administration, English, health education and agricultural theory are also taught. Again, external work contracts are an important source of revenue since the Government only provides salaries. All the buildings have been built by Centre personnel. Trainees are said to earn 500 cedis a day on weekends. The National Youth Service has recently been persuaded to take on the graduates. The explicit aim of this is to provide them with cash to buy tools to enable them to become self-employed.

Northern Sectors

1. Sang JSS, Yendi. The school was closed because of rain. There was one old style permanent four classroom building with a leaking roof, and a local new mud and thatch building to accommodate primary school students so that space could be found for JSS. There had been conflict with other villages, so now only students from Sang come to the JSS. Big problems of dropout with 31 students in P1 and only three in P6.

2. Sambu P.S., Yendi. At the time of arrival there were 52 students present but no teachers because of rain. The headmaster and a teacher were called. The headmaster was behaving very strangely and it later turned out that he was insane, and had recently had to be chained up in the village. The Assistant Director was aware of this but had decided not to remove him as it was near the end of term. He had evidently also collected money for exercise

and textbooks but these had not yet been provided. There was a conflict in the village, with a new English/Arabic school also being established. Last year there was a school farm (which produced cotton), but this year there is none. There were 42 students in P1 and only six in P6.

3. Nuru-Saheediya, English/Arabic P.S. Yendi. This was an active school with many teachers in each grade. However only the Arabic teachers were present. The English media teachers had not come because of rain.

4. Kizilo JSS, Yendi. This is a double-stream JSS, with 59 students. However, only 49 had paid textbook fees. There was no evidence of any practical work having been carried out, although some visits to local artisans had taken place. The district was planning workshop facilities one and a half miles away. The school farm was not very good. As the school was waiting for a tractor to plough the land, planting was late. A PTA was in existence but only ten parents had made a contribution of 1,000 cedis. The level of English ability of students was poor (but much better than average). Most students wanted modern sector wage employment. The headmaster was serious about his work, and was clear about the objectives of JSS.

566. Two JSS near the District Administration, Yendi. Despite the fact that these were almost under the eyes of the Assistant Director, there were no students and no teachers present.

7. Kalechn JSS, Tamale. This is one of the original JSS. The school was closed at the time of arrival. It has three streams (nine classes) and 29 teachers. Despite this large number of teachers, and the availability of GDR equipment and workshop facilities, it did not appear that any subjects were taught practically. Students want modern sector occupations. The school has two agricultural teachers but each teaches only nine periods a week.

8. Zuzun Night School, near Tamale. This class is run under a tree in the center of the village by CDR with no materials and no real method except "Bu, Bi, Bo, etc." Male adults were very eager to learn; female adults were not interested. The Community Development Department had promised literacy materials for the course sometime ago. The class had been started by a missionary who was rejected by the community because of his proselytizing.

9. Gurugure Night School, near Tamale. This night school is run on a voluntary basis by a final-year teacher training student who has not been trained in adult teaching. He was using primary school English language textbooks, obtained from the local education office. The course was taught in English. There were 68 students, divided into four groups according to their abilities. Class is held under the trees not far from the village.

10. Nyankpala Agricultural College, near Tamale. This is one of four post-secondary training centers run by the Ministry of Agriculture. Though this college is next door to the Nyankpala Crop Research Institute there is almost no relationship between the two. College students on graduation are not even expected to spread any new crop varieties developed by the Institute. The college trains technical officers for the extension staff. There are nine teaching staff (several of whom are National Service personnel) and 140 students. There is no syllabus, and there are no Ghanaian textbooks. The

college used to operate a sandwich course with a total of two years in residence and one year practical extension work in the field, but this has recently been changed, and from now on there will be three years in residence. The school year starts in February and ends in December, with two short breaks. The college makes very little profit from its farms, and the profit it does make goes to the Government chest. Students get a stipend of 5,000 cedis a month, but pay all their expenses themselves. The most striking thing about this visit was the low status of this college compared with the neighboring insititute (which had 15 Ghanaian professional staff and ten foreigners), and the almost complete lack of relationship between the two (each falling under different classes of the Ministry of Agriculture).

11. Saralugu JSS, Tamale District. Students were doing compound cleaning work when we arrived. It is a two-stream school with a total of 71 students, five regular teachers and three National Service teachers. The school is seriously overstaffed and the national service teachers had little to do. All except for four students also read Arabic. Half of the students want to be farmers, and the rest want modern sector jobs. The level of English comprehension was not bad. Life skills was the least popular subject. The textbooks were only half-finished, with the maths text only one-third finished. No practical work had been carried out, except on the school farm, which was quite good.

12. Diare JSS, Tamale District. There were 17 students and three staff, of whom two were National Servicemen. There is a two-and-a-half acre cotton farm, one acre of which is ploughed by the cotton board, with inputs also provided. The rest of the land was under tomatoes and peppers. All children come from farm families, and all want modern sector occupations, including going to West Germany. The students found the maths text very difficult, and did not like technical drawing. The level of English proficiency was poor, but 80% could read Arabic. Apart from agriculture there had been no practical work. Only about 40 pages of most texts had been completed.

13. UR Radio, Bolgatanga. There were two 5kw FM transmitters (one standby) and one generator at Bolgatanga, and two 5kw FM transmitters and two generators (one standby) at a relay station at Han, 128 miles to the west. Sixty percent of programs were received from Accra by microwave link and 40% were produced locally. Programs were picked up in Han through a high-gain recording transmitter. The station broadcasts from 5.30 am to 11.15 am and from 12.20 pm to 11.05 pm. There are four small studios, and 1 larger general purpose studio. Programs produced in five local languages are not transmitted by GBC I (Dungari, Sissala, Garume, Kassim, and Kasul). There are also announcements in English. Each program is written, produced, directed and broadcast by the same person. There is almost no audience research, and the station has no idea whether anyone is listening to the programs. As far as the school broadcasts are concerned, there is a feeling that they are being "broadcast to the grass". In 1986, wire broadcasting was stopped because reception was so bad.

14. Nanalo L.A. Primary, Navrongo. It was claimed that this was a double stream primary school, with three streams at P1. However, as there were insufficient classrooms the two streams doubled up, and thus there were

effectively only seven groups of children to be taught. There were, however 16 trained teachers, two modular teachers, and three sewing teachers, making a total of 21 teachers. The last three teachers had been sent to the school by the assistant director without having been requested. At the time we visited the school (at about 8.45 am) there were not even enough teachers present to teach the seven groups. There was a great shortage of textbooks with the students in the higher grades having access only to the teachers copies. The school farm grew beans and only made a profit of 800 cedis last year. The school had about 400 students but only 36 in P6, thus they have two streams. There is considerable waste with about double the number teachers employed as actually needed.

15. Ame JSS, Navrongo. At 9 am no one was teaching. Teachers and students were hanging around a dilapidated set of buildings, which were originally constructed as a boarding middle school, and then were converted to an experimental JSS. This is a two-stream school with 16 teachers and one National Serviceman, only ten of whom were present; there are 233 students. They have a five-hectar farm, but only managed to produce three bags of groundnuts. They have no links with master craftsmen, and most graduates end in the formal sector. The level of English was very poor. Most students come from farm families but only 20% are interested in being farmers. Textbooks were only about one-third finished.

16. Paga JSS, Navrongo. There are 36 students, three trained teachers, two laborers and a watchman in this school. The middle school, which used to be a continuation school, has three trained teachers, one vocational teacher, one sewing teacher and a farm assistant. The JSS was last inspected in February 1988, and last visited by a circuit officer in January 1988. The majority of children in JSS 1 could not write their names. JSS 1 is claimed to be very popular with parents, who are sending their children to repeat in JSS 1. There has been little progress made with any of the textbooks. The children basically had realistic career expectations.

17. Chuchulige SSS, Sandeman. This school used to be a continuation school. There are 40 students in JSS 1, with three qualified JSS teachers. The three middle school classes had three teachers, plus one woodwork and one needlework teacher, two farm laborers, and two night watchmen. This school was severely overstaffed. The school was last inspected in February 1988 and last visited by a circuit officer in January 1988. Despite the large number of teachers, the school still had not done any practical vocational or technical work; and despite the employment of two farm laborers, it made only 8,600 cedis last year from the school farm. The level of English comprehension in JSS 1 was exceptionally poor. All children come from farm families. The children had appropriate and reasonable career expectations.

18. Tano River Project (ICAUR Audio-Visual Unit). The project was originally designed as an engineering project and thus resulted in great opposition from the local people who even became involved in sabotaging the irrigation channels. Even now the project seems to have too much emphasis on purchased inputs, and not enough emphasis on what farmers can do themselves. Thus farmers remain dependent on the project. There are 6,000 farmers served by the project, 75 extension officers (each provided with a motorbike by the project) and a mobile video unit. The unit prepares local video programs as a

way of attracting farmers to attend meetings organized by the extension officers. It seems to be a relatively effective way of attracting people, but extremely expensive. No literacy programs are being run for the farmers, and the project has almost completely ignored schools. Because of the high cost/high staffing ratio of the project, there is not much that is duplicable.

19. Assembly of God Night Adult Class (12 miles east of Bolgatanga). Class was held in a chapel and was using a combination of hymn singing (for motivation) and booklets produced by the Ghana Institute of Linguistics and Bible Studies. Some of these booklets were based on bible stories, and some were more functional. Adults in the class were at different levels and were thus reading different booklets. There was also some teaching from the blackboard, but with only two lanterns there was insufficient light. With proper training of the facilitators the approach could become quite effective.

20. Tumu JSS, Tumu. This was an old experimental JSS, with two streams and a total of 17 teachers, a watchman, a farm assistant, a garden boy, a cleaner, a laborer and a typist. Apart from working on the school farm (24,000 cedis profit from two-and-a-half acres last year), there was no sign of any practical work being done. Some observation of a local blacksmith was reported. Last year all but two JSS 3 graduates progressed to some type of formal education, usually to Form 2 or Form 3 in secondary schools. No students were present at the school. Supposedly they were on the school farm.

21. Sorbelle LA Primary School, Tumu. No one was teaching at the school when we arrived. There were six classes and six teachers (five pupil teachers, of whom three were in modular training). The school also had an annex one-and-a-half miles away. The school was last visited in November 1986. In P6 (22 students) English and literacy level were so low that communication was difficult. The teachers, however, claimed that they were using English as medium of instruction directly from Grade I.

22. Jawiah JSS, Tumu. There were four JSS teachers for one class of 17 students. Both the headmaster and assistant headmaster were absent. No practical work had started, and one teacher had no idea of what should be done in practical science. The circuit officer had never visited the school on official duties, and the Assistant Director had last visited in December. The level of student literacy was very poor, as was the level of English. Only two students could read the textbooks. None of the JSS students wanted to be farmers.

23. Gwollu JSS, Tumu. At the time of arrival at the school, the 13 JSS students were weeding the compound, and only the headmaster was present. Again there were a total of four teachers, one in excess of the authorized level, and also one sewing teacher who served both JSS and MS. None of the equipment had been used. Of 12 children tested, two (both children of officials) could read, two could read poorly and, eight could read absolutely nothing. It should be noted that this is the base village of the circuit officer (whom we met) and was also the village where a new large \$500,000 health post was just being completed. As in many other schools in the upper west, the main building being used for the school was built in 1948; other poorly-built structures have been added in various places. No sign of community involvement in constructing JSS workshops was seen anywhere.

24. Global 2000. We had discussions in the Global 2000 Headquarters in Wa, and then in our field visits west of Wa we tried to find out what was actually happening. The Global 2000 approach involves close and continuous supervision, tractor ploughing (with private construction), provision of improved seed (from URADEP), and provision of fertilizers. Credit to finance these activities was arranged by Global 2000 through private banks, with farmers paying back their credit from their crop proceeds. In the first year 20 farmers were participating, in the second year 1,090 farmers, and in this year 6,000 farmers. Each farmer is limited to one acre. Traditional crop yields are 1-2 bags of sorghum per acre; now yields have increased to more than 5-16 bags per acre. Two bags an acre were required to pay off the debt. Quite a number of schools had participated for their school farms. The program did not include any non-formal education or functional literacy. Some reactions from the field brought up several technical complaints. First, it was claimed that by planting only two or three seeds in a hole often none germinated. Second, because the crop matured earlier than other crops, birds would eat the improved crops. Third, the inputs this year had arrived late. Last year many people claim to have made very little profit because of the high costs of the inputs.

25. Dorimon JSS, Wa. There are three JSS teachers (including one National Serviceman) and 15 students in this school. There is no school farm, but the carpentry tools had been used to repair school furniture. It was claimed that the science equipment had been used six times, and that the kit should be augmented with clamps and a pipette. Out of 15 students, two could read, two could barely read, and 11 could read absolutely nothing. Most students want to be fitters and carpenters.

26. Wenchian JSS, Wa. This school was the low point of the whole visit. It was surrounded by communities that wanted to have JSS, but had no buildings for the JSS. There were three teachers for JSS (including one National Serviceman) but only the headmistress was present. There are only 10 students in JSS 1, and of these only one student could read the P4 text. The other nine could read absolutely nothing. The school lost 240 cedis from participation in Global 2000 last year. This is definitely the type of JSS that must be closed down quickly.

27. Lassie-Tuolu JSS, Wa. By 12 noon the school had already closed and the headmaster was in Wa. There are only eight students in JSS, of whom only two could read at all. There are three teachers including a National Serviceman. Last year the school lost money from JSS because the school's agricultural land is water-logged. Altogether there seem to be too many JSS close to each other in this region.

28. Vierri JSS, Wa. There are 15 students in JSS 1, three teachers and a National Serviceman. There were flowers in the classroom, and it was the first school where tools were seen out of their boxes. Most of the students could not, however, name the tools, but seven of the 15 could read. The school farm was not very effective, as planting of the half acre of groundnuts was late due to the school vacation. Global 2000 was not successful in this area, as the crop was eaten by birds.

29. T.I. Ahmadiya English/Arabic Primary School, Wa. The school was closed down when we arrived, but of all the schools visited it seemed to have the best school garden with many protected tree saplings, and what appeared to be good Global 2000 crops.

30. Damongo Agricultural Training Institute, Damongo. There were originally five agricultural training institutes in Navrongo, Adidome, Wenchi, Auansi, and Damongo. Currently Navrongo has closed due to lack of students. The Damongo Institute was originally established with Canadian funds through the Catholic Church as training for a settlement scheme 7km from Damongo where credit, tractors, and other inputs were provided. In 1977 the settlement scheme was stopped and the course shortened from two years to one. The school has a capacity of 62 students, but since students were asked to make a contribution for their food of 1,500 cedis a month, there have been very few students (in 1985-11, 1986-41, 1987-15, and 1988-22). There are eight teachers and 34 workers, giving two staff for each student. The school has 2,000 acres of land but is only cropping 150 acres. Corn, groundnuts, cowpeas and vegetables are grown; three bullocks, four goats, and ten pigs are also kept. No fruit trees are planted, nor is the rice paddy planted. The curriculum includes the type of subjects that one would expect for training farmers, with the exception of courses in business, credit and marketing. There appeared to be no syllabus, and no Ghanaian teaching materials. Very little profit was made from the school farm, and the profits that were made had to be returned to the Government. A proposal had been prepared for German assistance for the college. Generally we were shocked that somewhere that was meant to be teaching youth how to farm could not make enough to feed its students. Until they are capable of running a profitable farm they are not capable of feeding themselves. We also felt that for the time being the excess capacity could possibly be used to train JSS cluster A teachers in agriculture.

Western and Central Regions

1. Bawjiase JSS. The school head has 20 years teaching experience and received three weeks JSS training at Cape Coast. He is assisted by a 6th form National Serviceman who had no training. Maize and vegetables are grown on the school farm. Water is a problem. The school tried to grow cotton with assistance in-kind from Cotton Development Board, but realised only 800 cedis. The garden is far away from school. Classes in technical skills are being taught despite the lack of a workshop. Books and workshop tools have been supplied, and tools are being kept in a private house. The school normally closes at 1.50 pm.

2. Obrachire JSS. The school head has 16 years experience and has received on week of JSS training. The agriculture teacher is untrained but had worked with Ministry of Agriculture for some years. There is a small garden. The school was able to buy seeds from the sale of a previous harvest. School land is limited, but the Chief has promised more land. The school realised 6,000 cedis from sale of maize; that money has been used by the school. Some tools have been supplied by GES. Children carry firewood to generate income for the school. PTA members are contributing 200 cedis per parent. World Vision has also contributed to workshop.

3. Mankessim "A" JSS. The school has one stream of 36 children. The head has 15 years experience and received two weeks JSS training. There is no land for a school farm. Turkeys are raised outside the school.
4. Mankessim "B" & "C" JSS. There are 72 children. Head has 25 years teaching experience, and two weeks JSS training. All teachers and masters attended a JSS orientation course. Boys and girls do practicals in vocational skills and home science. There is no workshop and the school is receiving only limited support from parents.
5. Asansi D/C JSS, Middle A&B. Head has 20 years experience and received one week of JSS training at University of Cape Coast. There are three JSS teachers for two streams. There are no personnel for vocational and technical classes.
6. Asuansi Farm Institute (Ministry of Agriculture). Provides one year general agricultural training to Middle School Leavers, retiring army, police, prison, NCOs and officers. Students are sponsored by their organization. Vegetables are grown and poultry and sheep are well kept. Students pay 50 cedis/day for food. Boarding and lodging are free. There are 102 students (21 women and 81 men), although the Institute has facilities for 120 students. Students are encouraged to own their small plots. The Institute also operates an oil palm and citrus plantation. Experimental practical work is done from 6.15 am - 8 am; theory from 9 am - 12.15 pm; and practicals from 3-5 pm.
7. Abakrampa Methodist JSS/Middle School. This is one of seven JSS within seven miles. Of the seven, only this one has a workshop. Land is available. Funds are needed for roofing. All JSS teachers are trained and have had JSS in-service training. The headmaster has 10 years teaching experience. Out of an initial class of 45 students, 40 remain. The supply of materials, books, tools is limited. Teachers who have done carpentry cannot teach other skills. Agriculture (farm practice) is organized by an Asansi farm labourer.
8. Shama Methodist JSS/Middle. There are five teachers in addition to the headmaster, all of whom received JSS training. The main problems are accommodation and classrooms. The community is helping to build a workshop. 80,000 cedis has been raised for a roof, with assistance from the Methodist Church. Tomatoes yielded 200 cedis. Corn harvested was not sold. Students bring in hoes, cutlasses and seeds (corn).
9. Konfueku JSS. The headmaster did not receive any JSS training. There is no teacher for life skills, and there are not enough books. There has been no land for a school farm until this term.
10. Agoma Junction JSS. The headmaster was not present at the time of our visit. There is one farm assistant and one watchman. The farm realised 4,000 cedis from sale of citrus seedlings. Books and tools have been supplied. The medium of instruction in the first three grades of primary school is the vernacular.

11. Nkroful Secondary School. The school has oil palm, citrus, a vegetable garden, and keeps pigs and rabbits. The school offers a full agric. course to 6th form. Students take "A" level agric science. There are 540 students, all of whom do agriculture. Income includes 100,000 cedis from pigs sold, 50,000 from oil palm, 20,000 from vegetables, and 70,000 cedis from 10 bags maize.

12. St. Andrew's Training College, Mampong. This institution offers agricultural training for secondary school teachers. Capacity of the school is 150. Last year the maize crop failed because of poor rains. Most machines broke down more than six years ago. No practicals are offered in machinery lessons.

Statistics on Primary, Middle and Junior Secondary, and Secondary Education

Primary Schools 1987/88

REGION	No. of Schools	No. of Pupils	Pupils/School	% of Girls	% Increase Enrollments 86/7 - 87/8	No. of Teachers	% Trained Teachers	Pupil/Teacher Ratio	No. of Non-Teaching Staff	Teachers/Non-Teaching Ratio	Teachers/School	% Increase Teachers 86/7 - 87/8
EAST ACCRA	584	145,163	249	48.98	6.1	4,693	87.5	30.9	115	40.8	8.0	27.7
LTA	1,261	162,568	129	45.17	-1.2	8,773	49.7	18.5	8	1098.6	7.0	22.5
SERN	1,688	239,854	142	45.20	0.2	10,199	59.8	23.5	21	485.6	6.0	2.1
INTRAL	990	162,571	164	44.57	-6.7	5,933	46.4	27.4	n.d.	n.d.	6.0	2.7
WESTERN	1,077	162,322	151	41.43	-7.3	6,878	36.2	23.6	n.d.	n.d.	6.4	-12.2
HANTI	1,575	275,494	175	46.21	-11.3	11,030	59.6	25.0	91	121.2	7.0	17.9
ONG AHAFO	1,266	164,291	130	45.37	-6.1	7,246	45.0	22.7	74	97.9	5.7	-15.6
RTHERN	926	92,300	100	33.05	-4.0	5,132	20.4	18.0	117	43.9	5.5	-23.1
PER EAST	292	40,317	138	38.17	0.5	2,088	46.9	19.3	224	9.3	7.2	8.5
PER WEST	252	33,567	133	40.72	20.2	1,189	54.0	28.2	66	18.0	4.7	-15.9
TOTAL 1987/88	9,911	1,478,447	149	44.20	0.8	63,162	51.1	23.4	716	88.0	6.4	0.4
TOTAL 1986/87	9,494	1,467,074	155	43.00	-	62,936	47.2	23.3	593	106.0	6.6	-

Source: Ministry of Education and Culture
Planning, Budgeting, Monitoring and Evaluation Division

Statistics on Primary, Middle and Junior Secondary, and Secondary Education

Middle and Junior Secondary Schools 1987/88

REGION	No. of Schools	No. of Pupils	Pupils/ School	% of Girls	% Increase Enrollments 86/7 - 87/8	No. of Teachers	% Trained Teachers	Pupil/ Teacher Ratio	No. of Non-Teaching Staff	Teachers/ Non-Teaching Ratio	Teachers/ School	% Increase Teachers 86/7 - 87/8
GREATER ACCRA	776	70,024	90	47.50	16.2	3,132	89.8	22.4	223	14.0	4.0	14.4
VOLTA	1,320	71,237	54	40.60	-18.2	6,898	66.7	10.3	138	50.0	5.2	30.6
EASTERN	1,728	113,859	66	40.80	97.4	6,359	73.5	17.9	131	48.5	3.7	10.9
CENTRAL	1,143	66,614	58	38.00	90.1	4,680	54.6	14.2	56	83.6	4.1	24.9
WESTERN	1,059	61,976	59	36.70	6.1	4,422	56.4	14.0	6	737.0	4.2	36.4
ASHANTI	1,636	128,694	79	42.20	21.1	7,474	69.8	17.2	658	11.3	4.6	32.7
BRONG AHAFO	1,190	73,075	61	42.00	137.9	4,309	66.7	17.0	215	20.0	3.6	15.1
NORTHERN	326	19,182	59	27.80	0	1,439	61.6	13.3	349	4.1	4.4	-23.6
UPPER EAST	190	12,478	66	35.90	25.9	877	29.9	14.2	307	2.9	4.6	3.2
UPPER WEST	227	6,201	36	37.40	9.7	939	68.3	8.7	177	5.3	4.1	56.5
TOTAL 1987/88	9,595	625,341	65	40.70	9.3	40,528	67.3	15.4	2,260	17.9	4.2	21.2
TOTAL 1986/87	5,327	572,108	107	42.70	-	33,443	65.2	17.1	1,726	19.4	6.3	-

Statistics on Primary, Middle and Junior Secondary, and Secondary Education

Senior Secondary Schools 1987/88

REGION	No. of Schools	No. of Pupils	Pupils/School	% of Girls	% Increase Enrollments 86/7 - 87/8	No. of Teachers	% Trained Teachers	Pupil/Teacher Ratio	No. of Non-Teaching Staff	Teachers/Non-Teaching Ratio	Teachers/School	% Increase Teachers 86/7 - 87/8
EASTER ACCRA	25	23,841	954	39.4	0.5	1,297	71.5	18.4	1,206	1.1	51.9	-0.54
DLTA	30	15,536	518	30.1	6.9	1,004	77.6	15.5	1,239	0.8	33.5	1.2
STERN	44	23,254	529	36.6	9.1	1,282	82	18.1	1,822	0.7	29.1	-2.1
NTRAL	28	18,300	704	37.8	8.5	909	87	20.1	1,286	0.7	35.0	-3.3
STERN	20	12,386	619	33.8	-8.2	680	79.3	18.2	843	0.8	34.0	1.8
HANTI	48	28,536	595	30.1	11.3	1,369	95.2	20.8	2,104	0.6	28.5	-7.8
ONG AHAFO	23	11,086	482	21.5	4.9	551	75.3	20.1	873	0.6	24.0	65.5
ORTHERN	11	6,507	592	18.9	13.7	325	71.4	20.0	574	0.6	29.5	-42.1
PER EAST	7	4,458	637	23.1	9.3	238	65.1	18.7	311	0.8	34.0	5.1
PER WEST	6	2,803	467	26.2	-0.4	154	100.0	18.2	184	0.8	25.7	12.5
TOTAL 1987/88	240	146,707	611	32.5	5.7	7,809	81.3	18.8	10,442	0.7	32.5	-2.6
TOTAL 1986/87	238	138,732	583	32.0	-	8,020	83.3	17.3	13,056	0.6	33.7	-

Survey of Reading, Writing, and Numeracy Ability
(percent)

Test		Primary 6	Middle 2	Middle 4
Read a newspaper	Yes:	32	55	93
	No:	68	45	7
Write a letter	Yes:	29	51	93
	No:	71	49	7
Written calculation	Yes:	70	89	98
	No:	30	11	2

Source: Ghana Living Standards Survey - Preliminary Results.

Primary Enrollments
1980/81-1987/88

<u>Year</u>	<u>Enrollment</u>	<u>Percent Change</u>	<u>Average Annual Growth Rate</u>
1980/81	1,377,734	-	-
1981/82	1,533,859	12.03	12.78
1982/83	1,461,635	-6.12	-5.93
1983/84	1,452,458	-0.63	-0.63
1984/85	1,464,624	0.83	0.83
1985/86	1,325,485	-9.98	-9.50
1986/87	1,467,074	10.15	10.68
1987/88	1,535,505	4.56	4.66
1980/81 - 1987/88		11.45	1.59

Survey of JSSI Students*

CAREER PREFERENCES

<u>Boys</u>	<u>No.</u>	<u>%</u>	<u>Girls</u>	<u>No.</u>	<u>%</u>
Teaching	38	25	Teaching	44	37
Doctor	27	18	Nursing	42	35
Engineering	24	16	Doctor	9	8
Driver	15	10	Seamstress	8	7
Fitter	10	7	Hairdresser	4	3
Farmer	8	5	Others	<u>13</u>	<u>11</u>
Police/ Soldier	6	4		120	101
Carpenter	5	3			
Footballer	4	3			
Others	<u>13</u>	<u>9</u>			
	150	100			

ACTUAL EXPECTED OCCUPATION

<u>Boys</u>	<u>No.</u>	<u>%</u>	<u>Girls</u>	<u>No.</u>	<u>%</u>
Farmer	22	22	Seamstress	25	31
Carpenter	17	17	Farmer	20	25
Teacher	9	9	Hairdresser	17	21
Driver	9	9	Teacher	10	12
Weaver	7	7	Weaver	4	5
Mason	6	6	Others	<u>5</u>	<u>6</u>
Fitter	5	5		81	100
Footballer	5	5			
Tailor	4	4			
Fisherman	4	4			
Others	<u>12</u>	<u>12</u>			
	100	100			

*Informal survey conducted by the study team in Central and Western Regions.

Sample Curriculum for JSS1 & 2 in Farming Skills/Modular Format

Assuming 30 effective teaching weeks per year (less holidays, terminal examinations, etc.); 3 X 1 hour lessons per week; 3 terms. In JSS1 there would be 90 hours of teaching time to be programed.

Some principles:

- As far as possible every module requires demonstration, action. explanation in that order.
- Teaching should be selective rather than comprehensive.
- Pupils should learn by enquiry and discovery. Teachers should ask questions and elicit responses from pupils.
- Teachers must be flexible - for example, classrom activities must be used on wet days.
- In every possible way, individual responsibility should be encouraged.
- Teachers should ensure adequate care for crops and livestock during weekends and holidays.

Proposed course outline (based on syllabus, textbooks and handbook):

<u>JSS1</u>	<u>Module</u>	<u>Chapters in book</u>	<u>No. of hours</u>
1.	Background to agriculture	1,9	6
2.	Soils in Ghana	2,6	15
3.	Vegetable growing	3,4,5	36
4.	Soil conservation	6	9
5.	Duck rearing	8,10	<u>24</u>
			90

<u>JSS2</u>	<u>Module</u>	<u>Chapters in book</u>	<u>No. of hours</u>
6.	Farm tools and buildings		12
7.	Record keeping		9
8.	Agricultural development		9
9.	Crop production (1)		36
10.	Poultry production		<u>24</u>
			90

11.	Pigs/Rabbits/Fish	30
12.	Cattle/Sheep/Goats	12
13.	Farm business	12
14.	Crop production	36
		<u>90</u>
		<u>270</u> Hrs.

Suggested time allocations for JSS1, modules 1 and 2:

Module 1: Background to Agriculture (6 Hours)

1. Introduction to the course;
2. What we gain from agriculture (food, clothing, health, shelter);
3. Ditto (goods, foreign exchange, income, employment);
4. The beginning of agriculture;
5. Development of agriculture in Ghana;
6. Test.

Module 2: Soils in Ghana (15 Hours)

1. Nature of the soil;
2. Composition of the soil;
3. Air in the soil;
4. Living things in the soil;
5. Other living solids in the soil;
6. Sand, clay and loam;
7. Organic matter;
8. Water;
9. Revision;
10. Differences between sand, clay and loam;
11. Soil profiles;
12. Recognizing soils;
13. Revision;
14. Revision;
15. Test.

GES Technical Institutes*
1987/88

REGION	NAME OF INSTITUTION	ESTABLISHED	ENROLLMENT
Greater Accra	Accra Tech. Training Centre	1966	399
	Tema Technical Institute	1966	617
	Ada Technical Institute	1982	217
Eastern	St. Paul's Technical Inst.	1957	709
	Koforidua Technical Inst.	1963	427
	Akwatia Technical Institute	1975	306
	Abetifi Technical Institute	1977	186
	St. Joseph Technical Inst.	1982	103
Volta	Kpandu Technical Institute	1957	
	Anlo Technical Institute	1975	345
	Have Technical Institute	1985	267
Central	Asuansi Technical Institute	1922	990
	Cape Coast Technical Inst.	1953	410
Western	Kikam Technical Institute	1960	359
	Takoradi Technical Institute		129
Ashanti	Kumasi Technical Institute	1976	1,190
Brong Ahafo	Sunyani Technical Institute	1967	869
Northern	St. Joseph's Technical Inst.	1985	87
Upper East	Bawku Technical Institute	1968	
	Bolgatanga Technical Inst.	1985	374

*Excludes polytechnical institutes and
teacher training colleges

TOTAL: 7,984

Privately-owned Technical, Vocational and Commercial Schools 1986/87

PRIVATE TECHNICAL SCHOOLS

REGION	No.	Enrollment		
		M	F	T
Accra	8	5,720	169	5,889
Eastern	6	2,206	23	2,229
Central	3	1,665	104	1,769
Ashanti	4	775	78	833
Volta	2	724	80	804
Western	*	*	*	*
Brong-Ahafo	*	*	*	*
Northern	*	*	*	*
Upper East & West	*	*	*	*
Total	23	11,070	454	11,524

* Figures not available

Source: Planning and Budget Division, Ghana Education Service

Privately-owned Technical, Vocational and Commercial Schools 1986/87

PRIVATE VOCATIONAL SCHOOLS

REGION	No.	Enrollment		
		M	F	T
Accra	8	146	1,337	1,483
Eastern	7	*	991	991
Central	3	*	429	429
Ashanti	7	103	1,485	1,588
Brong-Ahafo	5	205	517	722
Upper West	2	124	61	185
Northern	*	*	*	*
Upper East	*	*	*	*
Volta	*	*	*	*
Western	*	*	*	*
Total	32	578	4,820	5,398

* Figures not available

Source: Planning and Budget Division, Ghana Education Service

Privately-owned Technical, Vocational and Commercial Schools 1986/87

PRIVATE COMMERCIAL SCHOOLS

REGION	No.	Enrollment		
		M	F	T
Accra	22	2,099	3,255	5,354
Eastern	18	1,398	2,059	3,457
Central	9	820	831	1,651
Western	4	263	296	559
Ashanti	15	1,277	1,814	3,091
Brong-Ahafo	5	621	538	1,159
Volta	4	197	269	466
Northern	*	*	*	*
Upper East and West	*	*	*	*
Total	32	578	4,820	5,398

* Figures not available

Source: Planning and Budget Division, Ghana Education Service

Survey of Newspaper Advertisements for Artisan Employment
June 1987 - August 1988

Newspaper*	Number of Vacancies for Artisans	Qualifications Required	
		NVTI	GES/City & Guilds
<u>Daily Graphic</u>	1,124	831	293
<u>Ghanaian Times</u>	932	702	230
<u>Pioneer</u>	80	47	33
TOTAL	2,136	1,580	556
Percent	100	74	26

*Some advertisements appeared in both the Daily Graphic and Ghanaian Times.

SCHOOLS BROADCAST DEPARTMENT

A G.B.C. AUDIENCE RESEARCH REPORT

SPECIAL SURVEY OF LISTENING
AND VIEWING
1986

MARCH, 1987
SS/1/87

Introduction.

The following report on both radio listening and television viewing deals with the following:-

- I. Access to reception facilities including video;
- II. Frequency of listening and viewing;
- III. Suitability of listening and viewing times;
- IV. Listening to Foreign Broadcasters;
- V. 'Afrikania Mission';
- VI. Credibility of GBC, Foreign Broadcasters, Ghanaian Newspapers;
- VII. General comments on the GBC's output during 1986.

Methodology.

After the Panel re-organization exercise, 270 Panel Members were re-enrolled. Questionnaires were despatched to all of them during the last week of November, 1986. Out of this number, 103 have so far completed and returned their questionnaires. Eleven (11) Panel Members have written to inform the Department that the questionnaires did not reach them.

The response rate is 42%.

Composition of Responding Panel Members
Sample Base: 103

Table 1

<u>Region</u>	<u>Number Responding</u>
Greater Accra	32
Ashanti	19
Central	15
Eastern	14
Brong Ahafo	9
Western	7
Northern	3
Upper East	2
Volta	2
Upper West	-
Total	<u>103</u>

Table 2
Sex of Respondents

Male	98
Female	5
Total	<u>103</u>

Table 3
Educational Qualifications
(Level Attained)

University	13
Secondary School	53
Middle School	22
Other (teacher training)	15
Total	<u>103</u>

Table 4
Ages

21-30	5
31-40	38
41-50	33
51-60	17
60+	<u>10</u>
Total	<u>103</u>

Table 5
Marital Status

Married	93
Single	7
Widowed	<u>3</u>
Total	<u>103</u>

Table 6

Languages Understood
(In Addition to English)

<u>Language</u>	<u>Number Responding</u>
Akan	100
Ga	30
Ewe	13
Hausa	10
Nzema	8
French	5
Dagbani	2
Russian	1
Dangme	1
Wangara	1
Nafari	1

Table 7

Occupations of Respondents

Teacher	32	Barrister-at-Law	1
Technician	9	Rev. Minister	1
Clerk	7	Policeman	1
Postmaster	4	Laborer	1
Public/Civil Servant	4	Herbalist	1
Pensioner	3	Straighter	1
Draughtsman	3	Trader	1
Student	2	Typist	1
Druggist	2	Commissioner of Oaths	1
Manager	2	Housewife	1
Fire Officer	2	Tax Collector	1
Social worker	2	Sales Supervisor	1
Accountant	2	Self employed	1
Medical Officer	2	Civil Engineer	1
Store-keeper	1	Secretary	1
Horticulturist	1	Training Officer	1
Traffic clerk	1	Nurse	1

Public Relations Officer	1	Health Inspector	1
Education Officer	1	Plumber	1
Printer	1	No Response	2

RESULTS
Sample Base: 103

Part 1

Access to Reception Facilities

Radio Receivers.

All 103 responding Panel Members have access to at least one radio receiver.

Table 8
Distribution

<u>Type of Receiver</u>	<u>Number Responding</u>
Loudspeaker Box	14
Wireless Set	65
Pre-set radio	29
Radio Cassette	40
Car Radio	3

(Approximately 1.5 receivers per listener)

Table 9
Power Sources for Operating Sets

<u>Source</u>	<u>Number Responding</u>
Batteries only	25
Mains only	25
Both	48

Receiver Capability.

Panel members were requested to indicate the capabilities of their receivers. Responses were as follows:

Table 10

<u>Band</u>	<u>Responding Number</u>
Shortwave	91
FM	36
AM	26
MW	1

Television Receivers.

Sixty-one (61) out of the 103 responding Panel members have access to television.

Out of this number, 5 have access to both color and black and white sets, one has access to only color and the remaining 44 have access to only black and white television sets.

Video.

Twenty-four out of the 103 respondents have access to video. Two watch video 'at home' and the remaining 22 watch in the following places:

Table 11

<u>Location</u>	<u>Number Responding</u>
Video Centre	9
Friend's House	9
Relation's House	2
School Assembly Hall	<u>2</u>
Total	<u>22</u>

Part II

Frequency of Listening and Viewing (1986)
Sample Base: 103

Table 12

<u>Frequency</u>	<u>Radio Two</u>	<u>Radio One</u>	<u>FM Station (Ar.)</u>	<u>GBC-TV</u>	<u>Video</u>
Daily or nearly daily	60	95	11	40	1
At least once a week	12	1	5	7	5
Once or twice a week	11	1	1	7	8
Less often	<u>9</u>	<u>-</u>	<u>6</u>	<u>7</u>	<u>10</u>
Total	<u>92</u>	<u>97</u>	<u>23</u>	<u>61</u>	<u>24</u>

Some Comments.

Reception.

1. Reception has improved considerably (8)
2. Radio Two is not clear at 5.30 a.m. Sometimes it is not heard at all (7) (complaints from Aburi and Accra).
3. Those of us around Sampa only receive TV programmes from Ivory Coast (1).

Part III

Suitable Listening and Viewing Times

Table 13
Listening Times

<u>Time</u>	<u>Radio One</u>	<u>Radio Two</u>	<u>FM Station (Accra)</u>
Early morning	43	56	-
Morning	29	46	1
Late morning	8	11	7
Early afternoon	16	26	5
Late afternoon	22	33	7
Early evening	21	31	2
Evening	34	47	3
Late evening	26	45	-

Table 14
Viewing Times

<u>Time</u>	<u>Television</u>	<u>Video</u>
Morning	1	1
Late morning	-	1
Early afternoon	-	5
Late afternoon	1	2
Early evening	21	3
Evening	47	10
Late evening	20	1

Foreign Broadcasters

Sample Base: 88

Eighty-eight (88) out of 103 responding Panel Members listen to foreign broadcasters. The table below indicates the overall frequency of listening.

Table 15

Frequency of Listening

Broadcaster	Daily Or Nearly Daily	At least Once a Week	At least Once a Month	Less Often	Total
BBC World Service	68	15	5	-	88
Voice of America	32	23	4	2	61
Radio Nigeria	12	14	7	1	34
Radio France Int.	-	12	2	-	14
Deutsche Welle	-	7	2	1	10
Radio South Africa	-	4	1	2	7
Radio Gabon	2	3	-	1	6
ELWA	1	4	1	-	6
Radio Moscow	1	3	1	-	5
Radio Togo	1	1	1	1	4
Radio Liberia	-	1	-	-	1
Radio Cameroun	-	1	-	-	1
Radio Peking	-	1	-	-	1

Comments.

Compared to the results of a similar survey carried out in 1985, responses indicate that the incidence of listening to foreign broadcasters is very high. Station preference at the top (i.e. the first three in rank order BBC, VOA, Radio Nigeria) remains unchanged.

Responses also indicate that most listeners tune in to foreign broadcasters at dawn/early morning and late evening when GBC is off the air.

Foreign Radio Programmes Listened To

Sample Base: 88

Table 16

BBC

<u>Programme Title</u>	<u>Number Responding</u>
World News	54
Network Africa	38
News about Africa	6
Focus on Africa	4
Commentary (News)	4
Reflections	3
This Sporting World	3
Music (General)	2
This Week in Africa	1

Table 17

VOA

<u>Programme Title</u>	<u>Number Responding</u>
World News	23
Daybreak Africa	14
News & Commentary	6
African Panorama	5
Music Time in Africa	4
Sports	3
Music (General)	3
African News	2
Night Time Africa	2

The World Today	1	Newsdesk	2
Religious Service	1	Spotlight on Africa	1
Financial News	1	Music Requests	1
		Religious Programmes	1

Table 18
Radio Nigeria

World News	15
Music	6
Sports	1

Table 19
Radio France Int.

World News	5
France Calling Africa	2
Pop & Jazz Music	2

Table 20
Radio ELWA

Religious Programmes	4
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Table 21
Radio Gabon

Music	4
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Table 22
Radio Moscow

<u>Programme Title</u>	<u>Number Responding</u>
News	3
Sports	1

Table 23
Radio Cameroun

<u>Programme Title</u>	<u>Number Responding</u>
News	1
Sports	1

Table 24
Deutsche Welle

News	3
News Behind the Headlines	2

Table 25
Radio Peking

Current Affairs	1
News	1

Table 26
Radio South Africa

News	3
Music	1

Comments on Foreign Broadcasters.

A. Reception.

Reception on BBC and Voice of America is good all day (9).

B. News. (In general).

Responses indicate that News is still top listening preference. All responding Panel Members who listen to news from foreign radio stations particularly from BBC and VOA claim that they hear more 'detailed' and 'informative' news. 'Sometimes BBC carries more detailed news about Ghana than GBC'!

C. Other Comments.

- i. 'VOA news about Africa is always slanted.
- ii. 'GBC does better at news reporting than many foreign radio stations.
- iii. 'GBC can capture a wider audience if it transmits programmes including news 24 hours'.

D. Network Africa - BBC.

- i. The programme is very interesting and informative (6).
- ii. Efforts must be made to stop false reports, people, (mostly dissidents) give about various governments on 'Network Africa' (1).

Part IV

Credibility of GBC, Other Foreign Broadcasters
And Ghanaian Newspapers

The following were responses to the question 'when an event is reported differently on GBC radio, other foreign radio stations and Ghanaian newspapers which one would you believe?'

<u>Carrier</u>	<u>Number Responding</u>
GBC	59
BBC	28
VOA	2
Ghanaian Newspapers	1
Undecided	13

Comments.

1. I will use my sense of judgement (2)
2. It depends upon the type of news and the interest of the station reporting (6)
3. I will believe GBC if it is Home News (4) or Sports (1)
4. I will believe BBC if it is World News.
5. Radio is more truthful than newspapers.
6. BBC is always first with the news.

Afrikania Mission
Sample Base: 103

Sixty-five (65) out of 103 responding Panel Members have listened to Afrikania Mission at one time or another and the remaining 38 have not listened to the programme. A few of those who listen claim they listen 'out of curiosity' or 'for entertainment'.

A majority do not approve of the programme and would wish that the programme is taken off the air completely.

Favorite Comments.

1. 'The programme depicts our traditional African Religion and should be given the chance to grow and spread' (5).
2. 'It is interesting, realistic and entertaining'.
3. 'One religion is as good as another' (1).

Unfavorable Comments.

There was a large number of unfavorable comments on the programme some of which are quoted below, which represent in sum the feelings of respondents:

1. 'He (Osofo Komfo Damoah) is brewing fetishism and Christianity in the same pot'.
2. 'Osofo Damoah has failed as a Catholic priest. He has failed politically - former PNDC Member. He is confused in life and now wants to combine paganism with Ghanaian culture. He has no interest in the on-going Revolution else he would not have resigned as PNDC Member. What he is doing is to suit his own selfish ends. He is a confusionist. Please put an immediate stop to this programme'.

Suggestion.

- 'Give other religious bodies the same broadcast time' (3).

Unsolicited Comments from Listeners.

In addition to responses of Panel Members to questions on Afrikania Mission the Department has received a number of letters from listeners protesting the airing of the programme. The following are three extracts which sum up the views of listeners on Afrikania Mission:-

1. 'This programme is so disgraceful to us as a nation of Christians.
2. 'It is wrong and indeed an insult to our intelligence as a people for the GBC to assist propagate such blasphemy under the pretext of preserving our cultural heritage.
3. 'By continuing to given him (Damoah) publicity we are turning more

ignorant and innocent children to him and from worshipping the true God. For posterity sake and mother Ghana, this devil must be stopped before ruining Mother Ghana. ... 'It is an abuse of religious freedom'.

General Comments.

1. 'Both G3C radio and television saw tremendous improvement in 1986. There was an improvement in both reception and the quality of programmes'. (45)

Specific programmes which came up for mention are:

'Be in Tune'; 'Reflections'; 'Yen Sem Pa'; 'Work and Happiness'; 'Radio Lawyer'; 'Antire Pa'; 'Wonshi Dzama'; 'Africa This Week'.

2. Reception on the FM Station in Accra is very clear (3).
3. The morning shows are good (3).
4. Announcers and newsreaders should learn to pronounce local names correctly. (2)
5. Scheduled times for 'Work and Happiness' are not suitable for workers. (2)

Suggestions.

1. 'Aboe' should be repeated on Saturdays. (2).
2. 'Pidgin' English should be avoided on 'Variety Entertainment'.
3. With the introduction of URA Radio, Hausa and Dagbani programmes should be reduced on Radio One.
4. 'Say and Sing' is useful but as not all Schools have radio sets could it not be changed to the evenings?
5. TV transmission time is still too short.

Curriculum Division,
Ghana Education Service,
P. O. Box 2739,
Accra.

1st December, 1987.

Minutes of the Fourth Technical Committee Meeting
On School Broadcast Held at the Office of
The Director, C.R.D.D., On Wednesday
28th October, 1987.

Present.

- | | |
|------------------------------|---|
| 1. Rev. Vanderpuije | Asst. Director, Teacher Education, G. E. S., Accra. |
| 2 Mrs Sarah Opong | Ag. Director, Basic Education, G.E.S., Accra. |
| 3. Miss Grace P. Bonney | Ag. Director, Sec. Education, G.E.S., Accra. |
| 4. Ms. Rosina Amaning, | Chief Controller, Radio Research, G.B.C., Accra. |
| 5. Mrs Maud Blankson-Mills | Head of Audience Research, G.B.C., Accra. |
| 6. Mr. Hector Odei | Controller (Radio Schools) G.B.C., Accra. |
| 7. Mr. J.K. Adu | Asst. Director, C.R.D.D., G.E.S., Accra. |
| 8. Alhaji R. Gbadamosi | Director, C.R.D.D., G.E.S., Accra. |
| 9. Ms. Helen Amartey-Quarcoo | Liaison Officer, C.R.D.D., G.E.S., Accra. |

Absent.

1. Director, Inspectorate Division, G.E.S., Accra.

Opening.

The meeting was declared open by the Chairman, Alhaji R. Gbadamosi. This was immediately followed by short prayers from Rev. Vanderpuije.

Adoption of Minutes.

After the necessary corrections were made, Rev. Vanderpuije moved for the adoption of minutes and this was seconded by Ms. Bonney.

Matters Arising.

The Chairman informed members that because of the problem of pre-set radios in the schools, the Under Secretary for school Education Mrs. Vida Yeboah had wanted to meet the Committee, but unfortunately, she was on sick leave at the time the Committee was meeting.

At this point, Mrs. Sarah Opong, who first conveyed the message of the Under Secretary's desire to meet the group to the Chairman, explained why Mrs. Yeboah had wanted to meet the group. This was because she had read in the Daily Graphic, a press interview which stated that school communities or Parent Teacher Associations would help schools to acquire their own pre-set radios. This disturbed her a little, because at that time, as the committee was told, the World Bank had agreed to buy the radios for the schools and the World Bank man was in the country at the time. But unfortunately, there was no time for Mrs. Opong to have any detailed discussion with Mrs. Yeboah on the topic. The committee therefore decided that Mrs. Opong should consult further with Mrs. Yeboah on the topic of buying pre-set radios for schools and to find out if all schools in the system would be catered for.

At this point Ms. Bonney suggested that in order to avoid duplications in distributing the radios the records should be examined to find out which schools have radios and which do not. This suggestion was approved by all members.

Estimates.

Alhaji informed members that after having examined the estimates, especially on fees for script-writers, the Director-General of the Ghana Education Service found it necessary to have them reviewed because he thought they were too low to attract any serious work from script-writers, and that, fortunately, had been done by the G.B.C. staff.

The review of the estimates raised the cost to a level which Alhaji told the G.B.C. staff, the G.E.S. alone could not bear and would have to be supported by the G.B.C. On this issue, Mrs. Maud Blankson-Mills stressed that it was necessary for the two Directors-General to meet for a discussion. Mrs. Opong too was urged by members to find out from Mrs. Yeboah how much aid was coming from the World Bank and if it could cater for other schools apart from the J.S.S., and also for other things concerning Schools Broadcast. Some of the topics to be discussed by the two Directors-General are:-

1. Payment of script-writers;
2. Production of work-books and other materials;
3. Rates for paying transport charges.

After this there was a long discussion on the rates for paying script-writer's fees and transportation allowances.

On transportation, Ms. Rose Amaning informed members that she chose to use a flat rate because that had been the procedure and that script-writers are supposed to bring their scripts in bulk because they do not want script-writers to capitalize on making too many trips to the G.B.C.

At the meeting members suggested that the following rates should be used for paying script-writers and presenters:-

<u>Writing Time</u>	<u>Rate (Cedis)</u>
10 - 15 minutes	300
15 - 20 minutes	400
20 minutes	500

<u>Recording Time</u>	<u>Rate (Cedis)</u>
10 - 15 minutes	150
15 - 20 minutes	200.

In a discussion on paying transportation allowances, some members agreed that there should be a flat rate for paying script-writers. But at this point, Mr. J.K. Adu drew members' attention to the fact that, it would not be fair to pay the same rate to somebody who writes 76 scripts as to somebody who writes only 36 scripts.

This view was shared by Ms. Grace Bonney who made members aware that if proper care is not taken, the payment of the flat rate may result in the production of shoddy work from writers. She further suggested that for paying transport allowances, distances as well as number of visits paid, should be taken into consideration, but the number of visits should be limited according to the number of scripts expected from a script-writer.

The following rates for paying transport allowances were therefore suggested by members:-

<u>Number of Scripts</u>	<u>Rate Per Term</u> <u>Cedis</u>	<u>Rate Per Year</u> <u>Cedis</u>
72 lessons	700.00	2,000.00
36 below	400.00	1,000.00

Duplication.

Here the Chairman pointed out that, in the estimates, Biology and Chemistry have been costed twice (1) under Basic Education and (2) under Secondary Schools, and therefore asked Ms. Rose Amaning to remedy the situation.

At this point the chairman was informed that the Dagbani script-writer had still now showed up. Here members were informed by Alhaji that the script-writer promised to do the work but he did not know the cause for the delay.

The Advisory Board.

The Chairman informed members of a memorandum from the Director-General G.B.C., which said that the formation of such a board was no longer necessary since the Technical Committee was doing everything. Members agreed to this and asked that the functions of the committee be spelt out again. The Chairman therefore asked the Secretary to bring out functions of the Advisory Board for the study of the Committee once again.

At this point Mr. Adu, suggested that the Director/Technical should be invited to serve on the committee.

Members were informed that a representative from the Inspectorate was present the previous week when the meeting was supposed to have come on but said it would not be possible for him to be present on the new date that had been scheduled for the meeting.

Training of Personnel.

The GBC staff on the committee were asked to brief the committee on how training courses for script-writers are organized.

Mr. Hectar Odei then informed members that the courses are of one to two weeks duration. Script writers are assembled and appropriate lecturers are invited to brief them on script-writing and recording. At this point the chairman asked Mr. Odei to draw up a short training programme for script writers. Members suggested that the GBC should be responsible for the training courses.

Further in the discussion on training courses for teachers who handle Schools' Broadcast programmes, Mrs. Opong suggested that she would make use of a massive training to be organized for primary school teachers to brief them on how to use Schools' Broadcast programmes. But members did not think that the briefing in the general training for the teachers alone would be effective and therefore some other courses should be organized solely for briefing teachers in the classroom on how to use the programme.

Here Mr. Adu suggested that there should be courses for Regional Liaison Officers who in turn would run courses for the teachers in their regions. This can be done after the mass training for teachers. At the same time the liaison officers could be used as evaluators.

Comments on Programmes.

Mr. Odei asked members to bring out their views on the programmes that have been broadcast so far since schools resumed.

Here Mr. Adu observed that some of the scripts contained jokes and some things that go to make the scripts too long. Others, like 'Social Studies' sounded tense and hurried because too much has been, perhaps, put into one lesson.

The lessons in 'Life Skills' were commended highly by the members who have had the opportunity to listen to them.

At this point members came to a unanimous decision that scripts should be well vetted before going on the air, and this was to be done by Rose Amaning, (Ms) chief controller of programmes. The Chairman therefore suggested that there should be some kind of guide-lines for monitoring the programmes. Members were then supplied with model guidelines which had been designed by the G.B.C.

After this members suggested that the committee should be invited to listen to a programme being broadcast at the G.B.C. This was after Mrs. Blankson-Mills had offered to bring a copy of a programme for the committee to study.

Members' Meeting.

It was decided at the meeting that members should meet on the first Wednesday of every month. But this would always be confirmed.

Any Other Matters.

Members accepted to act as Advisory Board and Technical Committee all at the same time.

Closing.

Mrs. Blankson-Mills moved for the meeting to come to a close and this was seconded by Mrs. Opong.

Closing prayers were said by Rev. Vanderpuije.

Distribution.

All members and Director, Technical Division.

GBC Sample Scripts

SCHOOL BROADCAST - LIFE SKILL SERIES

LESSON V

1. Class Test.

2. Theme:- The Food We Eat.

The Ghana Six Food Groups.

Teacher. Good morning children. Today we shall have a short test before we take the day's lesson. Take your pens and papers. Complete the following sentences by supplying the missing words.

1. The size of your body, the color of your skin and the height of your body may be signs of Heredity from your parents.
2. The way you look, act, think and behave all go together to make your Personality.
3. Some words that you should like people to describe you with are (nice, honest, pleasant).
4. Since you sweat too much try to take your bath at least once a day for the boys and twice for the girls.
5. The cheapest item you can use to prevent smell on your body is lime.

Now exchange papers and mark the test. Go over and give the correct answers. I hope you had more than three answers right.

Now children our topic for today is the sources of food that we eat in Ghana. Some foods grow well in certain areas so that many people try to eat foods which grow in areas where they live. This is because such foods are usually easy to obtain and cheaper than foods from other regions.

For example, millet, rice and guinea corn grow very well in the Northern and the two Upper Regions, therefore the people there prepare all kinds of dishes from these foods. Two dishes that are prepared from millet for example is Tuo Tzafi and Fula.

Children, can you think of at least one dish, prepared from guinea corn and two from rice grown in the North. In addition there are guinea fowls and other birds which are killed for food. A lot of yams are also grown in the North and certain parts of the Brong Ahafo Region. All the other regions grow plenty of plantain, cassava, cocoyam and some yams. A lot of hunting for animals like antelope, deer, grasscutters also take place in these forest areas. In the South vegetables like pepper, garden eggs, okra, then maize, cassava and fish from the sea are produced for food. In addition to what people produce in their areas, foods produced in other regions can be found all over the country, because it is easy to take them round by lorry.

Now children you will all draw the map of Ghana with the help of your teacher, clearly mark the 10 regions of Ghana and write the foods which are produced in each region. Do this for homework and show it to your teacher. Now that you know the foods produced in each region, let us take a closer look at the foods that are produced or eaten mostly in the area where we live. I hope you did a little bit of science in the Primary School. For the benefit of those who did not, I think I better tell you all about the food groups. Generally foods that we eat have been divided into three main groups. These are:

1. The grow foods i.e. the foods that make the body grow tall or big in size, examples of such foods are, meat, fish, eggs, milk, beans, groundnuts, snails and many others we shall learn later.
2. Protective foods, i.e. the foods that protect us from certain diseases. Examples of such foods are fresh fruits and vegetables of all kinds.
3. And the last one - the go foods or energy foods. These are the ones which provide energy to enable you do all the work that you have the strength to do. Such foods are cassava, yams, rice, corn sweet potato, plantain and cocoyam.

Now children make a list of all the foods that are grown in the area where you are and the ones that your mother buys from the market too. Try to put them into 3 groups according to the list we have just discussed.

1. Grow foods;
2. Protective foods; and
3. Energy foods.

Your teacher will help you. You see this is something you should know from Primary school. Show your work to your teacher. Okay - Now that you know the three food groups I am sure it will be easy to learn that the same foods can be divided into six smaller groups.

You see children, every country tries to help the people in that country to know about the foods produced so that the people will eat properly. So Ghana has her foods divided into six groups which is called the Ghana Six Food Groups.

Children, have you heard about the six food groups before? I hope so. Now listen carefully and write the names down. The six food groups are:-

1. The animal products - meat, fish, snails, crabs, eggs, milk, etc.
2. Beans, nuts and oily seeds - groundnuts, agushie, akatoa, broad beans which are usually used for making soups, cowpeas, or adansawa or yoo also neri or wrewre.
3. Fruits and vegetables - oranges, mangoes, pineapples, bananas, kontomire, garden eggs, spinach, petter, tomatoes.

4. Cereals and grains - maize or corn, rice millet, guinea corn and bread which is made from wheat.
5. Fats and oils - including palmoil, groundnut oil, shea butter, margarine etc.
6. Starchy roots and plantain - cassava, cocoyam, yam, sweet potatoes and plantain.

So children you see that we have got our own six food groups. Now the rule which goes with the six food groups is - eat foods from each of the six food groups every day. You can only grow well when you eat from each group, you can also be protected from certain diseases when you choose your daily meals from the six food groups and finally you will get all the energies you need to run around, jump high into the sky, play football if only you choose foods from each of the six food groups.

Now children, draw a big circle to occupy two pages of your note book. Divide it into six equal parts. Now draw pictures of the foods for each group. Use your colored pencil to color and label. Your teacher will help you and mark your work for you. Your teacher will also ask you to bring certain food items which will be grouped into the six groups. Then you will cook breakfast, lunch and supper from them to show you. Okay children have a nice time and don't turn the kitchen upside down when you are cooking.

Until next lesson, good bye.

TEACHING TECHNIQUES
TERM 3 1987 LESSON 1

THE IMPORTANCE OF TEACHING AIDS

Hello students and welcome to this term's lessons. Whenever we begin to teach, there are certain things we use to make our teaching interesting and meaningful. For instance, we can show a picture of a cow or bring in a pawpaw fruit. These we call teaching aids.

Our topic for discussion this week is the importance of teaching aids. In what ways do they help learning? What types are there and what are their uses? These are what we shall examine today. There are two main types of teaching aids. They are: non-projected and projected aids. Non-projected aids include chalk boards, charts or wall drawings, textbooks, drawings, the flannelgraph, photo-printing, teaching models and concrete materials.

Two projected aids employ the use of projection which include the projecting lantern or diascope, the episcopes, the epidiascope, the overhead projector, the miniature diascope the filmstrip projector, the micro projector, the silent motion film projector and the sound motion film projector.

Students, why do we use teaching aids? We use them because we want to make learning more meaningful and purposeful. In learning we have to build fresh, vital and accurate concepts. We find that it is when the learner relates the new concept to some past or present experience that the resultant learning can be realistic and meaningful. It is therefore necessary for us as teachers to excite as many sense areas in the child as possible. For this reason, the child should be involved completely in the learning situation so that several of his senses would be brought to bear on what is being done. Approach through the ear, eye, and touch make for more complete understanding and greater retention. The more specific objectives are listed below:-

1. Audio-visuals or teaching aids are used to help students to focus their interest and attention on the subject being studied.
2. Audio-visuals are also used to show the basic structure of a concept. For example in the primary school the use of picture cards and counting objects illustrate a simple concept in mathematics.
3. Teaching aids also help to relate abstract materials with concrete ones. If we want to define the time bonds of a concept we should introduce the real object so that the child may see it and touch it.
4. Teaching aids also help in integrating scattered ideas into generalized ones, encourage verbal and written expression and help pupils to turn conceptual patterns into languages.
5. Finally learning or teaching aids can help explain relationships.

Students, the above objectives are meant to remind us that audio-visuals or teaching aids can make presentation come out with new meaning and more universal understanding.

We as teachers are often puzzled as to when we should use say a picture, a series of slides or flat pictures in a teaching situation. Much will depend on specific situations. For example, if motion is important to learning, a motion picture is probably the best. On the other hand, if individual student study is the situation then the use of flat pictures may produce the desired results. We should conclude then that the selection of the teaching aid to be used will depend on the nature of the problem of communication involved.

Students, let us now examine some of the requirements of good teaching. The first point we should consider is self preparation. The teacher should consider the value and purpose of the material being used.

The needs and interests of the students should be considered. The teacher should also determine the nature of the problem of communication and select a teacher method/medium that will best solve problems.

The classroom should be prepared. The necessary materials should be got ready and arranged. The light should be controlled if necessary and the ventilation and seating arrangements should be checked. The teacher should then prepare the pupils or class. Let pupils know why a particular method of teaching is being used. Help pupils to know what you expect them to get out of it.

1. Discuss with the class the presentation of work;
2. At the end of the lesson there should be a summary.

Make conceptions or ideas clear and give them a test if necessary. Then after these there should be a follow up of activities. Students, we shall now discuss the chalk or blackboards. What we knew as blackboards some time ago, have come to be known as chalkboards because they can be produced in other colors. It is expected that teachers will put vitality into their lessons through the use of good clear well-proportioned illustrations.

Students, why do we use the chalk or blackboard?

It is because it is the quickest and easiest piece of teaching aid which can be used in illustrating an important point. Furthermore, the chalkboard is immediately available and can add variety and contrast to what we teach. Moreover, it can be cleaned quickly and something new can be added as the lesson progresses.

We should now consider pictures and picture files. We can select our pictures from a wide variety of sources such as newspapers, magazines and books. In addition we can have drawings, paintings, illustrations and photographs which provide us effective and inexpensive materials, simple to buy and easy to use.

Students, what do these still pictures provide? They provide motivation for our pupils and bring added interest to the learning situation. Besides,

they assist in developing language, art and creative expression such as story telling, dramatization, reading, writing, painting and drawing.

Students, let us now find out how pictures are to be used. We should, when selecting pictures as well as other teaching materials, have specific aims in mind. It is wise to select as few pictures as possible which is felt will best foster understanding. Pictures can also be used as background displays on the walls. They can also be used as learning experiences in developing understanding. There are many ways of developing a picture file. A picture file can be developed by:

- a) selecting;
- b) mounting;
- c) classifying; and
- d) filing.

When we as teachers collect and select pictures, we should answer several questions before the selection takes place. For example, which pupils will be using these? What are the objectives in the collection and use of these pictures? How will they be used? We should also have some specific objective in mind such as the suitability, artistic and technical correctness of the picture. Good composition, clearness in detail, size and effective coloring should also be noted. Students, how should we file and classify our pictures? Whatever pictures a teacher has, unless they can be located and used are of little value. We can file and classify pictures so that they can be easily identified and located. How we store our pictures will depend on the size and type of filing system in use. Manila folders or large envelopes could be used. If your school has no filing cabinet, strong cardboard, cartons may be used for the folders. A very effective way of classifying our pictures is to develop a method or system of subject headings such as A - Farm Animals, B - Pets and C - Wild animals. Students shall we now turn our attention to the use of concrete material? We can best study real objects as they exist in their natural surroundings. This is the reason why field trips or excursions are undertaken. No experience in school can produce the reality of the field trip. When the field trip is impossible for the time being, the next alternative is to bring the object to the child but we shall discuss the real object in our next lesson.

Students, today we have learned that we use teaching aids or audio-visuals in making our lessons more interesting and meaningful. We also mentioned the two types of teaching aids. Non-projected aids which include, charts, chalkboards, textbooks, then projected aids such as lanterns film strips, and overhead projectors. We should remember that no teaching aid can take the place of real objects or concrete models. We need to prepare ourselves, our classes or pupils and involve them in some form of activity.

Students, that ends today's lesson.

Good bye.