LIBERIA

Education and Human Resources Sector Assessment

September 1988

IEES

Improving the Efficiency of Educational Systems

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Howard University
Institute for International Research
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Education and Human Resources Sector Assessment

September 1988

Coordinated for the Government of the Republic of Liberia by
the Ministry of National Planning and Economic Affairs and
the Ministry of Education with the USAID Improving the
Efficiency of Education Systems Project

LIBERIA EDUCATION AND HUMAN RESOURCES SECTOR ASSESSMENT

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1.1 Introduction

This assessment of the education and human resources (EHR) sector in the Republic of Liberia reviews the country's education and training systems in terms of the nation's goals and plans, the status of activities, identifiable needs, existing constraints, and the opportunities and options for change. This report has been coordinated for the government of Liberia by the Ministry of Education and the Ministry of Planning and Economic Affairs with support from a team of technical specialists provided by the USAID Improving the Efficiency of Education Systems (IEES) Project. Critical support has been provided by the staffs of government and private agencies, by the personnel of the USAID-Liberia Mission and by individual Liberian citizens.

The purpose of this EHR assessment is to:

1) establish a data base and methodological model for improving the systematic planning of human resource development in Liberia;

2) identify the areas of most serious need and the constraints on the options for change;

3) specify particular areas where reallocation of present resources can promote the most cost-effective changes;

4) provide a basis for long-term improvements in the planning, implementation, and monitoring of EHR development.

The basic structure of the assessment is to view sectorwide constraints in terms of financial, manpower, and management capacity. Subsector chapters then cover preprimary and primary

education, secondary education, teacher education, vocational and technical education (VTE), higher education, and nonformal education (NFE).

Within each subsector chapter the historical setting, national goals and strategies, and organizational structure of the subsector will be discussed. In addition, each subsector will be analyzed in terms of programmatic issues such as enrollments, teachers, curriculum, evaluation, facilities and equipment, cost and financing, and donor support. The subsector analysis will cover five specified summary issues: external efficiency, internal efficiency, access and equity, administration and supervision, and cost and financing.

This executive summary chapter is designed for use both as an introduction to the full EHR sector assessment report and as an independent sectorwide survey. However, the conclusions and summaries presented here can be appreciated fully only if taken within the context of the more detailed presentations of the individual subsector chapters. Readers are encouraged to refer to these subsector discussions when additional clarification or greater detail is required.

1.2 National Goals

Three broad goals are stated in the Second Four-Year National Socio-Economic Development Plan, 1981-1985: economic diversification, improved income distribution, and Liberianization. The most recent national plan for education, the National Education Plan, 1978-1990, called for expanding

access to formal education, improving educational quality at all levels, and strengthening administrative and supervisory capabilities of the Ministry of Education.

1.3 Social and Economic Background

With its creation in 1847, Liberia became Africa's first modern independent nation. Between independence and 1980 the government and most formal social structures of Liberia were in the control of Americo-Liberians, former slaves and freemen who chose to be repatriated to Africa in the 1820s and later. In 1980, a military coup resulted in the formation of the People's Redemption Council, headed by then Master Sergeant Samuel K. Doe. In 1984 an Interim National Assembly was formed and on October 15, 1985, elections were held with Dr. Doe declared the winner. On January 6, 1986, Dr. Doe was sworn in as the First President of the Second Republic.

The official language of Liberia is English but sixteen other languages, from three major linguistic groups, are spoken in various parts of the country. English is the language of the schools, commerce, and of all official government publications.

In addition to the descendants of the original Americo-Liberian settlers, there are six major tribal groups: the Bassa, Gio, Grebo, Kpelle, Kru, and Mano. These six groups represent approximately 70 percent of the population which is variously estimated at between two and three million. Life expectancy at birth is estimated at between 50 and 55 years and the growth rate

of the population is expected to average 3.2-3.3 percent over the next decade.

The Liberian economy generally is described as dualistic with a traditional, subsistence-based, agrarian sector (with some cash cropping) and a raw materials, export-oriented monetary economy which supports both the public and private modern sector service activities. The major sources of exports are rubber, cocoa, coffee, logging, and iron ore production.

The country is in the midst of a worsening economic crisis which has both external and internal determinants. The low prices for Liberia's export commodities over the 1980s has reduced potential government revenue at the very time when the new, post-1980 government was expanding employment and salary scales. With a poor record of revenue administration and expenditure control, the result has been a continuing period of fiscal deficits over the last eight years.

While a positive balance of trade has been achieved at times, this has been more a result of depressed import levels than successful promotion of exports. In 1988, the government maintains substantial domestic and international arrears (the latter leading to recurrent balance of payments deficits) which have resulted in the discontinuance of new direct support from the World Bank and the International Monetary Fund.

Employment in the economy has declined in the export sector as the concessions have tried to reduce costs by releasing redundant staff. The government now is following similar

procedures in the civil service with the result that a significant aggregate decline has occurred in the labor market demand for workers at almost all skill levels.

The uncertain economic situation has discouraged new investment from domestic and foreign sources although there are some signs that the government's privatization policy for parastatal enterprises may improve this situation. The currency market in Liberia has become an important issue in recent years; the Government of Liberia released $70 million into the economy between 1982 and 1987. The initial effect of this infusion of local currency was to subsidize capital flight by reducing the need to retain U.S. dollars in Liberia (the U.S. currency is officially accepted throughout Liberia). The secondary effect, occurring since 1986, has been to increase local inflation and to cause a divergence in exchange values between the Liberian and the U.S. currencies.

The immediate need is for the Government to reestablish economic stability through the balancing of the national budget; the long-term goal is to reduce domestic and international arrears. Even an increase in the international market for liberian exports would not resolve the current crisis without concomitant changes in Government economic policy and management practice. The political commitment and institutional capacity to accomplish the necessary reforms is uncertain but the next five years will be critical in determining Liberia's long-term prospects.

1.4 Costs and Financing

The Ministry of Education (MOE) has suffered a budget reduction of approximately 24 percent between 1984/85 and 1986/87. With these reductions allocated to non-personnel items, the percentage of the instructional activity budget going to personnel costs now exceeds 95 percent. The MOE also suffers from the breakdown of its data collection, analysis, and dissemination systems with the result that there is no adequate data base with which to identify problems and their scope or to use in designing efforts at reform.

A major constraint on the MOE has been the reoccurring delays in salary payments to teachers. This has disrupted school operation and had a seriously negative effect on teacher morale. In addition, the budget reductions have reduced the availability of basic textbooks and instructional support materials necessary to assist Liberia's teachers in achieving effectiveness in the classroom. Finally, the MOE's supervision system is adequately staffed but resources do not exist either for appropriate training of the personnel or for the support (especially transport and communication costs) necessary to allow them to fulfill their responsibilities.

The disrupted situation in schools, combined with depressed economic conditions, has led to declining school enrollments, at least through the 1987 school year. Major improvements in both internal and external efficiency of schooling--from the primary

through the university level--will be required for education to once again become an effective factor for Liberian development.

Educational financing in Liberia is a joint effort of government, religious missions, private organizations and institutions, and parents and local communities. The share of total costs borne by private individuals has increased in recent years both as a matter of policy and as an inevitable consequence of expenditure shortfalls by the government. There also is an indication of an increasing preference for private education by families who can afford this alternative.

Per-student expenditures at the three academic pre-tertiary levels is as follows:

Elementary Education -	$114
Junior Secondary Education -	$245
Senior Secondary Education -	$442

Because of recruitment and management problems at the Rural Teacher Training Institutes (RTTIs) in Zorzor and Kakata, per-student costs in these programs were extraordinarily high in 1987 at $13,158 and $5,634 respectively (exclusive of student salaries). Because of high repetition and attrition rates throughout the Liberian system, internal efficiency of education programs appears to be quite low.

Higher education programs do not allow for easy summaries of cost or performance, but again internal efficiency appears poor in many programs and employability of graduates is becoming a

major problem. A special policy question that exists is whether the University of Liberia is the appropriate site for the large scale remediation programs caused by conditional admission of an increasing proportion of new students.

Over forty-seven separate vocational and technical programs are identified in the later discussion with these programs widely differentiated by control and funding structures. The one systematic conclusion that applies to all these institutions is the need to link their operations more closely with the private sector and to increase the external relevance of their training programs.

For the next decade the MOE will face a continuing challenge in meeting its recurrent costs obligations. Better budgetary support from the government and improved management by the MOE will have to be supported by extended grant assistance from donors for the phasing in of current project costs as part of the recurrent budget. The establishment of priorities for quality enhancement before quantitative expansion will be necessary if these collective efforts are to succeed in improving educational opportunity, creating meaningful access, and promoting effective achievement in Liberian education.

1.5 Key Analytical Issues in the Assessment of the Liberia EHR System

Analyses of each of the EHR subsectors in the assessment identifies issues in five categories: external efficiency, internal efficiency, access and equity, administration and

supervision, and costs and financing. These categories have proven useful for studies of the EHR sector and enable examination of the basic concerns of education and development. Furthermore, use of this comparative framework for all subsectors makes it easier to discern strengths and constraints which may be systematic to the EHR sector rather than specific to a given subsector.

An EHR system is externally efficient to the extent that education and training can contribute to sustained economic and social development, build knowledge and skills geared to specific employment opportunities in the economy, and are balanced in terms of type and quantity of output. A system is internally efficient to the extent that it optimally allocates and uses available resources for improving the quality and increasing the quantity of education. Qualitative inefficiencies, when they exist, are reflected in low student attainment, weak teacher preparation and effectiveness, inadequate or inappropriate content and presentation of curricula, and low availability and utility of instructional materials and resources. Quantitative inefficiencies, when they exist, can be manifest in high rates of attrition and repetition, low student/teacher ratios, and underutilized physical facilities.

Access concerns the proportion of the target population reached by the education system. Equity concerns the extent to which these opportunities are made available for all segments of the population, without restriction due to factors beyond an

individual's control such as gender, socioeconomic status, and rural-urban location.

Administration and supervision concern the capacity to manage the EHR system and its individual programs effectively. In particular, this issue area is concerned with the managerial and analytic capabilities of the system and institutional administrators. Important in this regard is an ability to assess needs and to design, analyze, manage and evaluate education and training programs. Administration and supervision also include specifying responsibilities, distributing them from the central to the local levels, and having supports available for appropriate program monitoring and guidance.

Analysis of costs and financing focuses on aggregate expenditures for education and human resources development nationally, by level and type. It also involves growth projections and assessment of the likely impact of EHR development on total recurrent costs. At the micro-level, the analysis of unit and cycle costs facilitates comparison of program outcomes relative to cost.

1.5.1 External Efficiency

Major external efficiency issues exist at all levels of the education system. Full determination of these issues is constrained by a lack of current data within the education system and by the absence of systematic analysis of the linkage between specific education and training experiences and labor market needs of the nation.

Particular problems of external efficiency are observed in the teacher education, vocational/technical, primary, and secondary education subsectors. There has been a dramatic decline in students entering teacher education and a high attrition of students enrolled in those programs. Teacher education students who do graduate tend not to enter or remain in teaching. Vocational and technical education is poorly articulated with the skill demands of the economy. Graduates have difficulty finding employment and employers suggest they are poorly prepared for the opportunities that do exist. At the primary and secondary levels, the low quality of the education students receive contributes to serious external inefficiencies as graduates are poorly prepared for continued schooling or for entry into the labor force.

Compounding the poor quality of the education students receive are current projections of a surplus of skilled manpower at all education levels. This surplus is not due to increased production of trained personnel, but to a general decline in labor demand resulting from the severe economic conditions facing the country. While this drop in manpower demand is due to factors external to the education system, it is expected to result in a further decline in the external efficiency of the education sector.

1.5.2 Internal Efficiency

Internal efficiency of Liberian education is low. Though there is an increase in the number of school-age children, the

percent of school-age children entering first grade has dropped from about 52 percent to about 34 percent since 1984. Aggregate school enrollments in Liberia during that time have dropped by an estimated 25 percent. At present, of every 100 Liberian children, only 14 will complete primary school in six years and only two will complete secondary school in twelve years.

The major impediment to internal efficiency is low instructional quality. This low quality is reflected in the recent decline in participation rate, a high attrition rate, the high failure rate on the national examinations given in the ninth and twelfth grades, and the high remediation rate at the university. The low instructional quality is due primarily to the lack of instructional materials, inadequate instructional supervision, a high rate of unqualified teachers, and the lack of mechanisms to monitor teacher or student performance.

A further constraint on internal efficiency is the lack of teacher incentives due to a series of reductions and delays in salary payments over the last three years and the logistical difficulties teachers experience in picking up and cashing their paychecks. This lack of incentives has resulted in a drop in teacher morale and difficulty in teacher recruitment. In addition, the salary cuts and delays have posed two problems for managers in the education sector. MOE personnel have been reluctant to make demands on teachers, principals, and other MOE staff who have not been paid. Secondly, salary delays have

inhibited the ability of MOE managers to elicit cooperation or enforce their directives.

The new Primary Education Project (PEP) offers a means of responding to internal efficiency at the primary level and providing a framework within which other subsectors also can be strengthened. However, success of the PEP will depend on the ability of the government to resolve a series of fiscal and management problems.

1.5.3 Access and Equity

While some progress was made between 1978 and 1984 in expanding access to schooling, access has declined since then. The percent of school-age children entering first grade has dropped by about 18 percent. Two-thirds of the school-age population have no access to schooling. Though the school-age population is increasing, the actual number of students in school is decreasing.

Within those larger trends, females and children in rural areas are the least well served. There are no formal barriers restricting female enrollment, but girls are significantly underrepresented in all subsectors of the education system. Girls account for only about 35 percent of primary and secondary school enrollments which, in turn, affects the proportion of female enrollment in higher education. Moreover, there is some evidence of a disproportionately high attrition among females during primary school.

Access to schooling favors children in urban areas. At the secondary level, 47 percent of all junior high enrollment and 61 percent of all senior high school enrollment are in Montserrado county (which includes the capitol city of Monrovia). Rural schools are less likely to have qualified teachers, textbooks, and instructional materials. Measurable evidence of these inequities are observed in the examination pass rates (1986 data) at the ninth and twelfth grades which differ dramatically by county with the lowest pass rates in rural areas.

1.5.4 Administration and Supervision

All major assessments of the MOE in the last 20 years have identified the weak management capacity of the MOE as a major constraint on educational development, a situation that persists. The weaknesses in management have been manifested by inadequate communication with and supervision of the schools, the lack of systematic information about the education system to support planning and resource allocation, and inadequate management of external funding for educational development.

Five factors contribute to these weaknesses in management capacity. These include the inadequate incentives for school and ministry employees to perform their jobs, the lack of effective systems to manage government and donor funds, the use of personnel who are not trained for the positions they hold, the absence of an intermediate or long-term plan (or planning process) that identifies development priorities in the education

sector, and the lack of clarity in job descriptions of educational administrators at all levels of the education system.

Problems encountered in efforts to decentralize the administrative staff of the MOE have been of particular concern. This decentralization has been unsuccessful and has contributed to an overall decline in the effectiveness of the education system, not because decentralization was an inappropriate goal, but because the particular strategy employed was not fully developed. The Ministry decentralized responsibility without decentralizing either authority or financing. The decentralized structure had no provision for meaningful accountability of district, county and regional personnel to the central Ministry. Further, district, county and regional administrations have suffered from a lack of operating budget, transportation with which to visit schools, and appropriate training to perform their intended supervisory and administrative functions. They also have experienced ambiguity and confusion over job descriptions, responsibilities, and reporting structures. The decentralized administrative structure has resulted in increased financial costs to the schools and the MOE without a resulting improvement in instructional supervision, information flow, or education quality. The MOE needs to consider reallocating decentralized administrative personnel in ways that can support efficiency and quality enhancement in the education system.

Management capacity also has been constrained by the lack of systematic information about the education system to support

planning and resource allocation decisions. The capacity to gather, analyze, report, and use information about the education system has eroded seriously since 1984. In the three years since the 1984 National Education Survey, no systematic data collection has occurred; only one county (of thirteen) has reported complete data in any given year. Consequently, the Ministry has no current data on the number of students or teachers in the system, or the number of schools in operation.

1.5.5 Costs and Financing

The financing of education presently is influenced by three factors. Donor assistance to the education sector has dropped dramatically in the last three years, the education share of the GOL budget has dropped, and over 95 percent of the MOE instructional expenditures are for personnel costs. Schools have received no instructional materials, operating, or maintenance budget from the MOE since 1984.

Given the current and projected constraints on the Liberian economy, it is unlikely that the GOL will be able to provide substantial increases in the education share of the national budget. External donor assistance will continue to be needed to support education. The ability of the GOL to compete effectively for these funds will require a clear and systematic effort on the part of the Ministry of Education to correct previous weaknesses in fiscal, information, and personnel management. Given recent donor experience, it is probable that the Ministry will have to

demonstrate improved management capacity before substantial new funds will be made available.

One approach to improving educational quality would be to leave student registration fees at the school level to be used for instructional materials and instructional improvement activities. This would, in turn, necessitate a change in the role of the decentralized MOE administrative staff which has generally relied on these fees to cover their operating expenses.

The primary cost issue identified was in the teacher education subsector where faculty:student ratios in the preservice programs are extremely low, yielding high unit costs to the institutions. In particular, the high costs per student at the RTTIs are not justifiable even if all graduates were entering and remaining in teaching. The reduced subsector demand for teachers, particularly primary school teachers, suggests that the most cost-effective approach to teacher training at this time is not preservice but inservice training.

1.6 Subsector-Specific Overviews and Recommendations

This section provides abstracts of each education subsector covered in this assessment: preprimary and primary (Chapter 4.0), secondary (Chapter 5.0), teacher education (Chapter 6.0), vocational/technical education (Chapter 7.0), higher education (Chapter 8.0), and nonformal education (Chapter 9.0). The abstracts briefly summarize the status of the subsector, principal challenges, plans, conclusions, and recommendations.

For a more complete discussion of these topics, the reader is directed to the subsequent chapters.

1.6.1 Primary Education

The primary school system consists of one to three years of preprimary followed by six years of primary education. Enrollments (grades 1-6) in 1984 were estimated at 146,508, of which about 37 percent were in private schools. Approximately 37 percent of the students were female.

Primary enrollments are estimated to have declined by 27 percent between 1984-1987, due in part to the declining economic condition of the country and in part to parent perceptions of deteriorating quality of education. The total private cost to attend a public primary school is estimated at $38, a per-student cost that has made primary schooling prohibitively expensive for many families.

About 4,872 teachers serve in public primary schools (grades 1-6), an increase of nine percent since 1984. Approximately 73 percent have a high school education or less and are regarded by the MOE as underqualified. In 1987, teacher student ratios were 1:28 in government schools, 1:25 in private schools. Noninstructional staff represent about 30 percent of the total staff in government schools, seven percent in nongovernment schools.

The national curriculum for primary education is formulated as a series of generalized goal statements but does not specify

how or what material is to be taught. The MOE provides a recommended list of books for each subject at each grade, however, no mechanism for monitoring compliance exists. Due to price and problems of distribution, instructional materials are not widely available in schools. The MOE has tried to address this shortage of instructional materials through a World Bank funded textbook project, which was unsuccessful due to a series of problems, and through the USAID funded Improved Efficiency of Learning (IEL) Project which developed programmed teaching and programmed instructional materials. The MOE currently is involved in a five-year phased national implementation of the Primary Education Project (PEP), a modified version of the IEL. The PEP is a competency based instructional system that emphasizes the use of programmed teaching materials in grades 1-3 and programmed instructional materials combined with textbooks and supplemental teacher activities in grades 4-6.

From 1970-1984 the number of schools increased by 69 percent, from 1,084 to 1,830 schools, due to GOL, Asian Development Bank (ADB), and World Bank financed school construction programs. Since 1985, GOL has not had funding for school construction and since 1986 the World Bank and the ADB have suspended their work in Liberia, so no new government schools have been built. Existing schools are poorly equipped and maintained. This situation has worsened since 1984 since the MOE has been unable to provide funds for school maintenance, furnishing, or operations.

The quality of instruction in public schools has been low due to the lack of instructional materials and the high proportion of underqualified and unqualified teachers. However, no national system exists for monitoring instructional quality at the primary level since 1973 when the Primary School Leavers Examination was discontinued.

The major challenges facing primary education are to improve educational quality by providing instructional materials and improving teacher quality, instructional supervision, and incentives for teaching. Success in enhancing educational quality also will require better data and personnel management systems and more effective communications between schools and the Ministry.

The MOE has identified primary education as one of the priority subsectors for development over the next five years. Current plans are to implement the Primary Education Project nationally and to conduct inservice teacher training to support that effort. Plans are to use the broadcast facilities of LRCN to support this inservice teacher education under funds already available through the PEP.

The decline in participation rate and the low quality of instruction in public schools both contribute to an extremely low level of external efficiency of the primary education system. Only 15 out of every 100 Liberian children can expect to finish primary school in six years and, for the nine of those attending

public school, the instruction they receive may not be adequate preparation for entry into the modern sector of the economy.

Perhaps more serious is the low level of internal efficiency, most of which results from the lack of teacher incentives, the high percent of underqualified teachers, a lack of instructional materials, inadequate instructional supervision within the schools, and weak management capacity within the Ministry. Of these, the lack of adequate or appropriate teacher incentives is the single largest constraint on the effectiveness of the primary system. A series of cuts and delays in salary payments have contributed to low teacher morale, low motivation, and high absenteeism. However, the capability to improve this situation rests outside the MOE.

Of the factors more within the ability of the MOE to address are the need to upgrade the teaching force and to improve management capacity within the subsector. Management capacity is weak at both the school and Ministry level. This is manifest in the lack of data for planning and management of primary education, poor management of donor funded projects, and poor communication between the Ministry and the schools. Although a cadre of trained personnel exists in the Ministry and education related institutions, there is serious need for improved management capacity if these skills are to be effectively used.

One further constraint on internal efficiency has been the difficulties of communication among the Ministry, schools and parents. Until recently there has been no effective way to reach

parents directly about new programs or to encourage parent and community support for primary education. The successful implementation of the Liberian Rural Communication Network (LRCN) offers a mechanism to communicate directly with parents. LRCN can be used to build community support for the schools, to help structure community participation and involvement in schooling, and to provide inservice teacher training.

Four conclusions emerge from the analysis of constraints and issues. First, the improvement of educational quality should precede further expansion of the primary education system. While the participation rate of school-age children in primary education appears to be declining, this issue cannot be effectively addressed until the quality of the education that is available is improved. The primary education subsector is well positioned to respond to this challenge through implementation of the Primary Education Project.

Second, successful implementation and eventual institutionalization of the Primary Education Project deserves priority over all other areas of concern regarding primary education. Rapid national implementation of the PEP will raise new issues of training, supervision, communications, logistical support, and project monitoring not encountered in the pilot phase and not all of which are adequately provided for in the current MOE planning or external funding of the project.

Third, improved management capacity of the Ministry of Education is essential to the sustained success of the PEP and to

the further development of primary education. The ability of the MOE to manage instructional materials distribution, teacher assignment, and data collection and analysis are necessary to successfully implement and sustain the PEP.

Finally, improved teacher incentives is a precondition for sustaining long-term improvements in the education system. Teachers have sustained a series of salary cuts and delays in payment that have undercut teacher morale and effectiveness and contributed to teacher attrition.

Among the specific recommendations based on these conclusions were, first, that the Ministry of Education should concentrate government and donor resources on primary education to help ensure success in implementing and sustaining the PEP. The concentration of resources on a well defined program can enhance the probability of PEP success which, in turn, can provide the experience, management structure, and incentives needed for education improvements in other subsectors. As part of this focus on PEP, the inservice training of principals as instructional supervisors should be expanded.

Second, the MOE should implement a systematic formative evaluation of the delivery and instructional effectiveness of the Primary Education Project at the classroom level. Results of this evaluation would be used to strengthen or modify the inservice teacher training and instructional supervision provided by the PEP. Results also can assist in planning for the teacher

training and curriculum design necessary to support the eventual entrance of PEP graduates into secondary schools.

A third area of recommendation is to leave school registration fees at the school level for use in instructional improvement activities. This represents the most direct means of providing resources for instructional improvement and represents the truest form of decentralization, which has long been a GOL policy. These funds should be under the control of a community council. Community members could be helped to understand the role of the council through the use of radio.

Finally, it is recommended that the information management system to support resource allocation, project monitoring, and planning decisions be revitalized.

1.6.2 Secondary Education

Students who complete the sixth grade are eligible to progress into junior high school (grades 7-9) and students who pass a national examination at the end of ninth grade are eligible to continue in high school (grades 10-12). Eligibility to graduate from twelfth grade is determined by a combination of students' grade 12 coursework and their score on a national examination administered at the end of grade 12. Students must pass both coursework and the national examination to graduate from the twelfth grade.

Sixteen schools offer junior high or senior high instruction exclusively; other schools offer various combinations of instructional levels. Government partially supports the operating

to help translate the curriculum into meaningful lesson plans. Schools generally lack textbooks and instructional materials for either the students or teachers.

The ninth and twelfth grade national examinations are developed and scored by the West African Examination Council (WAEC). Student performance on these examinations has been poor: In 1984 eighteen percent of the students who sat for the twelfth grade examination passed all four subtests (English, mathematics, science, and social science).

GOL annual expenditures per pupil are estimated at $245 for junior high and $442 for senior high. In addition, family contribution is estimated at $157 for public secondary students; $300-$800 for private secondary education. The amounts are substantial in a country where per capita annual income is estimated at $460. For a rural family with two secondary children, the fees would represent 68 percent of the annual income of the household.

The average cost of producing a junior high graduate in three years is 8.2 years or $3,296, and the average cost of producing a senior high graduate in three years is 7.4 student years or $4,013. The high costs are a function of wastage, repetition and low pass rates.

Instructional quality is low, due mainly to the lack of instructional materials, underqualified teachers, and frequent interruptions to instructional time as teachers leave school to

costs of the nonpublic schools through a subsidy scheme. However, the per-school amount of the subsidy has dropped, both because of an increase in the number of schools competing for the funds and a decline in the amount of Government funds available for the subsidy program.

Estimated secondary school enrollments in 1986 were 63,368 of which 35 percent was female. Public schools accounted for 47 percent of secondary school enrollment. However, public secondary schools are losing enrollments while nonpublic schools are gaining. Between 1981 and 1984, public junior high school enrollments dropped six percent while nonpublic junior high enrollments rose 179 percent. At the senior high level, public schools lost fifteen percent of their enrollments while nonpublic schools gained 137 percent.

The majority of secondary school teachers (58%) are underqualified and teacher attrition rates at the secondary level are high, particularly among qualified teachers, who have better career options. The teacher training system is only marginally able to keep up with demand. Preservice secondary teacher education occurs at the two universities. However, enrollments are low and those who do graduate frequently do not return to classroom teaching. Few inservice training opportunities are available for secondary school teachers.

A national curriculum for secondary schools exists but has not been widely implemented. Many schools lack copies of the curriculum and there are few course syllabi or teachers' guides

collect and cash their paychecks and to hold second jobs to supplement their income.

The three greatest needs in the secondary education subsector are to improve the quality of the instructional program, to ensure articulation between the PEP and the junior high curriculum, and to reduce the drain on secondary school resources caused by vocational skill tracks that operate in twelve secondary schools. The low instructional quality is evidenced by the poor national examination performance and the difficulties in recruiting and retaining qualified teachers.

A major conclusion of the analysis is that improving the quality of instruction should be a top priority within this subsector. Improved instructional quality will become even more important as schools begin to receive graduates of the PEP system who are expected to enter with better academic preparation than is now the case. This leads to a second conclusion, that the articulation of the PEP system with the junior high curriculum and instructional methods needs to be systematically planned. To date, this has not occurred.

Major recommendations are that teacher guides and suggested lesson plans should be developed to assist teachers in implementing the national secondary school curriculum. To expand the availability of instructional materials, secondary schools should rent textbooks to students. Vocational education programs should be eliminated from the secondary schools, since these programs are of low quality, teachers are not trained to teach

this content, and the vocational skills, when taught, are poorly aligned with the skill demands of the marketplace. Finally, the junior high curriculum should be modified to build on the PEP objectives and outcomes.

1.6.3 Teacher Training

Preservice teacher training at the baccalaureate level is offered at the University of Liberia and at Cuttington College. Two year preservice programs leading to a "B" certificate are offered at two Rural Teacher Training Institutes (RTTIs).* Inservice teacher training programs, some of which can lead to a "C" certificate, have been offered through separate programs sponsored by the World Bank and by USAID. While a 1986 policy now requires that all entering teachers must be certified, there remains a large backlog of uncertified teachers already in the system. These teachers are the target of the inservice programs.

University-Based Teacher Education Programs: Despite a 42 percent rise in the number of students admitted to the University of Liberia teacher education program from 1984 to 1987, the number of graduates decreased by 40 percent (1985-1986). About 15 percent of those admitted to the University of Liberia (UL) program between 1984 and 1987 graduated. The graduation rate at Cuttington has remained relatively stable. While the stated goal

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* A "C" certificate requires a high school certificate and one year of teacher training. A "B" certificate requires a high school diploma and two years of teacher training. "A" certificates are offered at three levels, corresponding to a bachelors, masters, doctoral degrees.

Both RTTIs follow a similar curricula, assessed as 60 percent education principles and methods and 40 percent content area specialization. Eleven subjects are offered per semester with a supervised student teaching experience during the second year. Though PEP has been adopted as the national primary education system, RTTI faculty are not involved in the PEP implementation effort and the PEP system is not taught within the RTTI curriculum. Graduation from the RTTIs is based on course completion; there is no exit examination.

Students pay $150 a year plus two bags of rice to attend an RTTI which covers tuition, board, and room. However, students who are already teachers continue to receive their teaching salary while enrolled.

Inservice Programs: In the early 1980s, two large-scale inservice programs were conducted for primary and junior high teachers; one funded by the World Bank and the second by USAID as part of the Improved Efficiency of Learning (IEL) Project. Under the PEP, these two earlier programs have been integrated into one inservice program consisting of three parts: (1) a 10-week course emphasizing sequenced learning materials leading to "C" certification for untrained teachers; (2) a four-week course emphasizing sequenced learning materials for teachers who hold certification; and (3) a six-week upgrade course for teachers who have had sequenced learning training.

Between 1987-1992 PEP inservice training will be provided to all primary school teachers in the country on a phased

of both programs is to prepare candidates for positions as elementary and secondary teachers, few graduates actually enter classroom teaching. Rather, many go into educational administration or leave education for positions in other sectors.

Entrance to either program is based on passing a university entrance examination. Approximately 80 percent of students admitted to the UL program require remedial instruction before they begin their degree program. At Cuttington there is no conditional admission and no remediation for admitted students.

UL has 21 faculty in the College of Education, Cuttington has five faculty in its Education program. Given the recent enrollment declines, student:faculty ratios are low.

The estimated cost to GOL for bachelor level education students is $1,061 per year. The GOL invests $4,244 for each graduate, many of who do not enter teaching or do so for only a short period of time.

Rural Teacher Training Institutes: Enrollments in the two RTTIs dropped from 254 students in 1982 to 38 in 1987. The drop is attributed to the loss of World Bank funds and to the lack of incentives for teachers. In response to the declining applicant pool, the RTTIs have relaxed their admissions standards, admitting some students without high school diplomas. This has resulted in an increased number of RTTI graduates who cannot be certified to teach, since a high school diploma is a prerequisite for certification.

implementation schedule. By 1992, more than 3,000 teachers and administrators will have been trained.

The greatest needs in the teacher education subsector are to improve teacher incentives in order to recruit and retain qualified teachers, to reduce the wastage and inefficiencies in existing preservice training programs, to prepare inservice teachers at the primary level to implement effectively the PEP, and to train instructional supervisors.

Loss of efficiency in the teacher training subsector has resulted from (1) the failure of the system to produce sufficient numbers of qualified teachers for current and future needs, (2) the exodus of many qualified teachers from the system, (3) the small number of preservice graduates relative to the size of staff and facilities in the four preservice teacher training programs, and (4) the high rates of wastage caused by the failure to coordinate teacher education resources.

Of particular concern is that articulation among the various groups offering pre- and inservice teacher education has been and remains weak. For example, there is lack of coordination between the RTTI and the University curricula. RTTI coursework cannot be transferred toward degree programs at either university. Similarly, PEP instruction is offered independently of the four preservice training institutions and PEP is not incorporated into the curriculum of the preservice programs. These problems contribute to low internal efficiency within the teacher education subsector.

The production of new teachers is far below the projected need. Teacher demand in 1986 was estimated at 236, actual teacher output from the four preservice programs was less than 100. At the same time, preservice education suffers from declining enrollments, a high dropout rate of those that do enroll, and a high percentage of graduates that do not enter teaching at the conclusion of their training. Despite decreasing enrollments, faculty size and operating budgets of the four preservice programs have not been reduced substantially.

The enrollment decline in teacher education is due, in large part, to reduced teacher incentives arising from the severe financial condition of the national economy. Reductions and late payment of salaries, the failure to implement the established salary schedule, and lack of operating funds in the schools have lowered the morale of experienced teachers and discouraged others from entering the profession.

The recent decline in grades 1-12 enrollment and drop in participation rate have reduced the demand for new teachers somewhat. Still, preservice programs have not been effective in producing graduates who go into teaching. At the same time, there is a substantial number of underqualified teachers already in the system. The most efficient use of resources for the foreseeable future is to concentrate on inservice training to upgrade the quality of the existing teaching force. This strategy would build on existing programs at the primary level. However, it would require the development of inservice programs

at the secondary level since, at present, there are no secondary inservice teacher education programs.

Conclusions of this section are, first, that inservice teacher training should be a higher priority than preservice training since (a) many existing teachers are unqualified for their positions and (b) the internal efficiency of the four preservice programs is low. Second, coordination and cooperation among the various teacher education programs and institutions needs to be strengthened. Third, mechanisms for collecting, analyzing, and reporting enrollment and teacher data need to be improved. Such data are needed to support more efficient teacher assignment practices and to project more accurately teacher supply and demand. Finally, the lack of monetary incentives for teachers has reduced the morale and productivity of the current teaching force, thus reducing the number of people willing to enter teaching.

In response to the decline in preservice enrollments, it is recommended that preservice teacher training at the RTTIs be suspended and the facilities used for other purposes. Second, the elementary education faculty at the universities should be used to help plan and deliver inservice teacher education. During this time, intake to the BS program in elementary education should be suspended. This recognizes the low demand for preservice elementary education at the bachelors level, the need for qualified trainers in inservice education, and the need

to link more effectively pre- and inservice programs, in this case by using some of the same faculty in both programs.

Third, primary school principals should be provided with more instructional supervision training than presently is planned under the PEP. This will help support the inservice teacher training planned for delivery over the next five years.

It also is recommended that the MOE create data collection, reporting and analysis procedures that will provide information about teachers and teacher assignments to support resource allocation and planning decisions in teacher education. Finally, the MOE should clarify the respective roles of the Bureaus of Teacher Education, Primary Education, and Secondary Education within the Ministry of Education.

1.6.4 Vocational and Technical Education

Vocational and technical education (VTE) is provided by over a dozen governmental and private organizations, including the Ministries of Education, Youth and Sports, and Public Works, missionary groups, and proprietary schools. However, organization and control of VTE is not under any single operating authority. Rather, there is a single coordinating and oversight board at the national level, the National Council for Vocational/Technical Education and Training (NCV/TET). Its mission is to promote balanced and unified VTE policy, study manpower and training needs, strengthen training institutions, and monitor programs. The Agricultural and Industrial Training Bureau (AITB) is its administrative and oversight arm. This

broad jurisdiction overlaps more than a dozen other governmental and private operating authorities.

VTE activities differ by their base of operation and the degree to which they are organizationally linked to the employment sector for which they prepare students. Those most closely linked are operated by an employer, or maintain on-the-job training or apprenticeships as a major element of the program. A second category includes specialized training organizations which have programs designed for one or more specific occupations. There are school or college-based programs which have significant vocational or technical training but offer academic or other subjects as well. The funding arrangements show considerable differentiation as well. Some government support is provided for the majority of the organizations, amounting to a total budget allocation of over $200,000 in 1987, although actual disbursement information is not available.

In the early 1980s there were approximately 7,000 students involved in VTE on a part-time or full-time basis. However, no systemwide statistics have been collected since 1984 and current enrollment information is not available. The lack of annual, systematic data collection is a serious problem within this subsector.

There are no teacher training programs for vocational/ technical education and a persistent complaint of people in the subsector has been the lack of adequately trained teachers.

However, recent data on level of teachers' training is not available.

The curricula of VTE programs cover a wide range of subjects with major concentrations in a few areas. The largest number of programs is in the secretarial, clerical and bookkeeping areas and in the building, manufacturing and repair trades. Rather than specifying required curriculum, NCV/TET proposes that training programs determine their own instructional sequence and that graduates be required to take the appropriate test as a means of certifying their skill level. One of the major efforts of the NCV/TET and the AITB, then, has been the development of national standards and testing procedures for selected vocational areas. These standards and tests were based on systematic task analyses of the trade. Standards and testing procedures are currently available in six content areas, though for financial reasons testing has not yet been implemented outside of Montserrado County.

Program costs relate directly to the subject of instruction and the organization of the program. Full-time day programs range from about $1,000 per student in the mission schools to over $2,000 per student in some government sponsored programs. Most donor support in VTE has come from the World Bank, which committed over $5.1 million to VTE between 1977-1985. An additional $2.53 million in a construction and staff development project was planned under the Fourth World Bank Project, but was canceled in 1986 when the Bank suspended its work in Liberia.

External efficiency of VTE is limited, first, by the lack of manpower and labor market data to guide program development. Second, it is limited by the high capital cost of securing and maintaining the equipment and technology necessary for relevant vocational and technical training.

Many of the most serious problems of internal efficiency involve inadequate facilities, equipment, and teaching materials. While some observers suggest that instruction is of low quality, other evidence suggests the problem is rather one of inconsistent instructional quality across programs and a lack of clear data on course content, student attainment, and teacher performance.

The major needs within the VTE subsector are for the provision of adequate resources to support existing programs, access to current and accurate information about manpower and labor market conditions, mechanisms for effective management, and improved coordination of the wide variety of programs and activities that fall within VTE. Needs arising out of the larger social and economic contexts are for expanded job opportunities and the involvement of employers in VTE programs. The key constraints affecting VTE are the unavailability of resources to support existing programs and the inadequate integration of VTE with the skill needs of employers.

The major conclusions of the analysis are that, first, VTE programs vary widely, depending on the integration of programs with their client and employment environment and the extent to which administrators can control resource allocations within

their program. Secondly, better data on manpower and labor supply are needed as a basis for program and curriculum planning.

The major research recommendation is for a tracer study of graduates across all VTE programs to determine graduates effectiveness and the articulation of VTE programs with the labor market. The major policy recommendation is to transfer resources now being used inefficiently in school-based VTE to more efficient, better integrated programs.

A further recommendation includes strengthening the capacity of AITB to develop and implement trade standards and testing procedures. Finally, a study of the qualification and training needs of VTE faculty should be conducted as the basis for developing instructional materials and inservice faculty training programs.

1.6.5 Higher Education

The higher education subsector includes two public institutions, the University of Liberia and the Wm. V.S. Tubman Technical College, and one private institution, Cuttington University College with historic ties to the Episcopal church. In addition, four other private institutions have claimed junior college status: Ricks Institute (now defunct), Zion Academy, Monrovia College, and the College of West Africa. Higher education institutions are largely autonomous of the Ministry of Education, which has supervisory responsibility for education only up to the twelfth grade. Each of the degree-granting

institutions has a charter from the National Legislature and a Board of Trustees appointed under the terms of that charter.

There are approximately 4,900 students enrolled in degree programs in Liberian higher educational institutions and approximately another 300 in continuing education and remedial programs. Enrollments at the University of Liberia have been increasing, those at Cuttington are stable, and those at WVSTT College have been declining.

The three institutions discussed here employ approximately 349 faculty members; 240 at University of Liberia, 86 at Cuttington University College and 23 at WVSTTC. The proportion of non-Liberian faculty is 32 percent overall, but climbs to over 69 percent for faculty holding doctorates.

There are at least 47 separate degree granting programs in operation. The University of Liberia offers 23 bachelors level degree programs and minor study in 9 other subject areas. Cuttington College offers bachelors programs in 12 of the same areas as UL, as well as programs in theology, educational administration, and general science that are not offered at University of Liberia. In addition, UL offers graduate programs in law, medicine, and regional planning and WVSTTC offers five associate degree programs. Approximately 3,000 of the 4,900 students are enrolled in science and business programs with the remaining 1,900 students distributed across the 29 other degree programs.

Admission to the BA/BS programs in University of Liberia and Cuttington University College requires a high school diploma and passing the National Examination. Applicants must also take a college-developed admission/placement examination. These are not standardized tests, but are developed to reflect the expectations of the individual campuses. Failure rates on these examinations are high; over 70 percent of students accepted to UL fail the test, enter on conditional admission, and must enroll in remedial programs for part or all of their first year.

There are no systematically collected data on which to base an assessment of instructional quality. However, the shortages of instructional materials and supplies, deterioration of classrooms and laboratories, erratic electrical power, small libraries, and poor preparation of students constrain educational quality.

External efficiency is constrained by the poor articulation among the higher education institutions and between the institutions and the economy. In particular, the lack of clear standards for course content and credit isolates the institutions. Students cannot transfer among them since there is no consensus on how to evaluate the courses for transfer. The poor fit with the economy is reflected in the low use of manpower planning projections in higher education planning and the poor fit between the training of graduates and the needs of the economy.

Internal efficiency of higher education is low, as reflected in the high remediation rates, high attrition rates (exceeding 60 percent in some programs at UL), and low student:faculty ratios in some program areas. The most serious constraint at UL is posed by the high proportion of admitted students who need remediation and at CUC by the decline in enrollments as applicants are unable to pass the admissions test.

A particular problem of internal efficiency is posed by WVSTTC. WVSTTC currently enrolls 140 students in a facility that can accommodate 250 and has a low student:faculty ratio. The poor preparation of entering students, lack of instructional materials and supplies, inadequately trained faculty, and inadequate physical infrastructure further reduce internal efficiency. Graduates have experienced difficulty finding employment.

Management in Liberian higher education is characterized primarily by dedicated staff working with inadequate resources, weak provision for internal quality control, no institutional research capacity, weak teaching evaluation methods, and a lack of institutional norms and standards for good management. Administrators are hampered by lack of management technology and lack of supervisory and incentive systems for management. There is also a general lack of integration between existing long-range plans and day-to-day operations.

Higher education costs are high, due to the costs of remediation (at UL), the low student:faculty ratios, and the low

output of graduates. In addition, there are weak cost and quality control mechanisms.

The UL and WVSTTC administration have an unreliable income flow from the GOL and relatively little discretion in how their GOL revenues are spent. With salaries paid directly by the GOL, UL and WVSTTC administrations do not have sufficient discretion to reallocate between personnel and other expenditures categories.

Perhaps the most urgent need facing higher education is for improved ways of dealing with the poor preparation of entering students. The University of Liberia continues to admit underqualified students, resulting in high costs for remediation and much wastage. Cuttington University College and WVSTTC refuse admission to these students and face a rapidly diminishing pool of qualified students.

A second area of need is for improved financing of higher education. The most important needs are (a) to regularize payments of institutional subsidies and faculty and staff salaries and (b) to institute restoration and preventive maintenance of basic structures and equipment needed for instruction.

Improved management capacity is a third major need of the higher education subsector. Improved management may not require financial resources, since many of the necessary management personnel already are in place, but does require more training and long-term planning.

Increasing the number of Liberian faculty is a fourth area of need. The costs of maintaining a large contingent of expatriate faculty is high and may detract from the cultural relevance that Liberian faculty can bring to their teaching.

A fifth area of need is for greater articulation among institutions. There is at present no basis for sustained articulation among the higher education institutions or between higher education institutions and secondary or vocational/ technical schools. A system of accreditation would allow the development of common standards and definitions of program content and performance.

The most important recommendations for the higher education subsector is that GOL examine alternative ways to address the need for remediation of incoming students to higher education. The unit cost of providing remediation at the college level is substantially higher than providing that same education at the secondary level where teacher salaries and operating costs are lower.

Secondly, it is recommended that new arrangements by which students finance more of their own higher education be developed. Specifically, student financial aid should be increased to allow more students to attend full-time, thereby reducing wastage due to program noncompletion. In addition, tuition should be increased to shift more of the responsibility for investment in higher education from the government to the student and family.

A third recommendation is that UL postpone the completion of the move of the University of Liberia to the Fendell campus. The completion of the Fendell campus and the move there is estimated to cost over three million dollars. This level of funding is not available, given the already austere University financial situation.

Finally, it is recommended that the management and coordination of higher education be improved through creation of a National Commission on the Quality of Higher Education. The National Commission could serve as a support structure for higher education management and development could operate a higher education data collection system and clearinghouse. The Commission should develop means of quality assessment and policies for institutional accreditation.

1.6.6 Adult and Nonformal Education

The major initiatives in adult and nonformal education have come from (1) the Ministry of Education through the Division of Adult Education (DAE), (2) other government ministries which view literacy and adult education as a necessary component of their larger development programs, (3) religious organizations, and (4) some of the larger concessionary companies which run programs for their own employees. DAE is responsible for coordinating and monitoring all adult education and adult literacy (AE/AL) programs regardless of their funding and administration. In practice, however, there is little communication between AE/AL program sponsors and the DAE.

Three categories of programs exist: (1) those basically concerned with a combination of subject areas (e.g., literacy, agriculture, community development), (2) programs that concentrate on adult literacy, and (3) programs that prepare adult education trainers.

Within the MOE sponsored programs, enrollment is estimated at 3,763, a 16 percent decrease since 1982. Although programs are intended for students aged 15 and above, indications are that a sizeable minority of those enrolled are recent primary and secondary dropouts. The 331 instructors in these MOE sponsored programs, are usually public school teachers who do it as a means of supplementing their income. There is at present no MOE sponsored training for adult education or adult literacy teachers.

Figures for total GOL expenditures on adult education and adult literacy programs are unavailable. However, the amount provided by the Ministry of Education for these programs was $386,568 in 1986. Some donor funding has been available in this area primarily from UNICEF, UNDP, and the World Bank.

The quality of instruction in MOE sponsored programs is low due to the limited availability of instructional materials and the lack of trained adult education teachers. Many teachers appear to view adult education more as a source of supplemental income than as a major educational thrust.

The major constraints on the development of nonformal education are the financial condition of government, the limited

information about the potential target population for adult education, the low level of training of some of the instructional personnel, and the lack of coordination of activities across the subsector. At the same time, the importance of nonformal education in national development is increasing since the participation of children in formal schooling has dropped. With the drop in school participation rate and enrollments in grades 1-12, more children will move into adulthood without the benefits of formal schooling.

Conclusions are, first, that the MOE needs more information about the needs, interests, and abilities of potential clients in order to develop more responsive educational opportunities. Second, the MOE and other agencies engaged in nonformal education activities need to do more to publicize those educational opportunities that are available already. Third, increased attention should be given to the development and distribution of instructional material appropriate for use with adults. Finally, more training should be available for adult education/adult literacy instructors.

Recommendations are that the MOE should sponsor a series of needs assessments in selected geographical areas to identify community interest and demand for nonformal education. Additionally, the Ministry should provide leadership in developing a voluntary instructional materials exchange among public and private groups involved in adult education and adult literacy. At the same time, it should continue and expand its

use of the Liberian Rural Communications Network to provide nonformal education to adults in rural areas. Finally, the MOE should develop a national plan for adult education as a means of guiding the resource allocation process.

1.7 Summary Recommendations for the EHR Sector

In this section an attempt will be made to draw together the most important options for EHR policy and practice presented in the EHR assessment. These options are proposed as topics for review and discussion within government and, where appropriate, between government and the donor community.

A product of this process of review and discussion is that the options should be refined, articulated, and organized in terms of priority. The sequence in which the options are presented here should not be interpreted as implying an order of importance or of temporal prerequisites. Since the rationales for these options have been discussed earlier in this chapter and in more detail in the subsector chapters, only a brief description will be provided here. The 15 most important options proposed for government consideration are:

1) Focus efforts on cost containment and quality enhancement in primary education and, to the extent possible as a second priority, in secondary education.

2) Leave school registration fees at the school level for use in instructional improvement activities. These funds should be under the control of a community council composed of local leaders and the school principal.

3) Expand the use of radio to support the decentralization of school financing. The broadcast facility of LRCN offers a unique means to reach local community leaders

directly with information on guidelines for how student registration fees should be collected and used at the local level.

4) Develop an information management system to support resource allocation, project monitoring, and planning decisions of the Ministry.

5) Develop a teacher assignment system as part of the improved information management system. At present, the MOE has no systematic information on the number of teachers in the system, their qualifications, or their teaching assignment. This information is necessary in designing the nature and scope of inservice training, reallocating teachers to meet changing enrollment patterns, and costing and allocation of monetary and nonmonetary incentives.

6) Discontinue the present system of decentralized MOE field staff and reassign the current incumbents to other activities.

7) Reexamine the administrative structure of the Ministry of Education. The size and structure of the Ministry of Education have not adjusted to the recent decline in the national economic situation, the loss of donor funds, or the apparent decline in school enrollments. Many policies and procedures appear to serve little or no function in improving the delivery of quality instruction in schools; some directly reduce the efficiency and effectiveness of schooling.

8) Develop a National Education Plan that details MOE intermediate and long-term strategy for sustaining educational development in Liberia. No systematic plan for intermediate and long-term educational planning has been developed since 1978. At present, the MOE lacks a clear plan for educational development to guide choices among competing demands on resources and to indicate how different offices and functions should be related.

9) Conduct a systematic formative evaluation of the implementation and instructional effectiveness of the Primary Education Project at the classroom level.

10) Consider the possible consolidation of primary schools in selected areas. The possible consolidation of small schools offers financial savings to the community, provides teachers with the support of a larger reference group of other teachers, and makes the delivery of instructional materials and supervision easier. As a first step, the MOE should sponsor a

school mapping study of geographical areas known to have a large number of primary schools.

11) Follow through on the implementation of the national curriculum in all secondary schools by creating teachers' guides and suggested lesson plans. One part of this should include a review and modification of the junior high curriculum to build on the PEP objectives and outcomes and to prepare for students who will have had the PEP.

12) Discontinue the preservice teacher training at the RTTIs and consider alternative uses for the RTTI facilities. The low enrollments, wastage, and resulting high unit costs at the RTTIs represents an unacceptable situation given the current and projected financial difficulties at GOL.

13) Conduct a study of the academic skills necessary for VTE programs, with a view to integrating the relevant skill training into the main VTE courses.

14) Examine alternative ways to address the need for remediation of incoming students to higher education. The unit cost of providing remediation at the college level is substantially higher than providing that same education at the secondary level where teacher salaries and operating costs are lower.

15) Sponsor a series of needs assessments in selected geographical areas to identify community interest and demand for nonformal education.

2.0 ECONOMIC AND FINANCIAL ANALYSIS OF EDUCATION AND HUMAN RESOURCE DEVELOPMENT IN LIBERIA

2.1 Introduction

This economic and financial analysis is divided into four main sections:

1) a survey of macroeconomic conditions and trends;
2) the analysis of the fiscal capacity of the Government and of the Ministry of Education to absorb existing and potential recurrent costs;
3) a review of current and projected manpower supply and demand conditions; and
4) an analysis of unit costs and returns to specific levels and forms of education and training.

The focus of this economic and financial analysis is on the existing and future constraints upon and opportunities for the education and human resource (EHR) sector in Liberia and how these factors should influence the EHR planning and management operations of the Government of Liberia (GOL). The analysis is based upon current and past data on structures and operations (and, as will be indicated, the current data situation is seriously lacking in quality and coverage). However, the emphasis of the discussion is solely on the present and future choices that must be made to improve EHR performance at the system and institution level. The analysis presented here will deal both with short-term, marginal changes that can improve EHR practices in a specific area and long-term, larger-scale policy

reform that would have an impact on the general EHR sector. The goal of this economic and financial analysis, and of the assessment report as a whole, is to examine a set of options that the GOL can consider in its efforts to improve the effects of the Liberian EHR system upon individuals and the society and economy.

The analysis presented here will indicate the dramatic nature of the troubled economic environment within which governmental and private EHR decisions will have to be made. A failure by government to take action to select and implement the options for EHR improvement would represent a forfeiture of administrative responsibility and a foreclosing of long-term developmental opportunities for the Liberian society. In the short-term, the economic environment that has been allowed to develop will greatly reduce the education and training system's ability to respond to the personal and economic needs that exist. However, it is also recognized that the long-term resolution of Liberia's economic crisis will be in part dependent upon the products of its EHR systems at all levels, and in both the public and private sectors.

Currently, EHR activities are failing to be the stimulus for social and economic development that they should be and that they were planned to be. In fact, the formal education and training system is in danger of becoming a negative factor for development because of reduced internal efficiency and an inability to produce the types and quality of graduates required for Liberian development. Within the government accounts, education and

training activities are in danger of becoming more significant as income transfer programs to civil servants and teachers than as investment activities in the skills and knowledge of the nation's citizens.

In the discussion that follows these problems, and some of their determinants, will be reviewed. A set of summary conclusions will be derived and, from these, specific recommendations will be made both on how the economic and financial environment might be improved and also on how the EHF operations in Liberia can be managed more effectively within the constraints that do, and in some cases will continue to, exist.

2.2 Data Limitations

Four main forms of data limitations must be faced in conducting an economic and financial analysis. The first is common to all countries and consists of the time delay that exists between actual economic events and their measurement. The earlier an estimate is made, the more likely that it will be revised and the larger will be the revision necessary. Because of this delay between event and measurement, all macroeconomic analyses must utilize data that is to some extent "dated." However, this is a limitation only if the time delay is substantial and the economic situation subject to significant variation in such a time period. Both problems exist with economic and financial data in Liberia.

The second problem, also common to all countries but at differing levels of importance, is that of unmeasured economic activity. Non-measurement may occur because the economic exchanges take place in a barter (non-money) exchange where actual exchange values are difficult to stipulate. Also, money transactions may take place in the "informal" economy and never enter into measures or estimates of aggregate economic activity. Finally, illegal activities cannot normally be incorporated into official government statistics. A budgetary parallel to these problems in the aggregate economy occurs when budgetary receipts or expenditures take place outside the official management budget of an organization or agency. To the extent that any of these activities occur in Liberia, the official measures of aggregate economic activity or of budgetary flows will be misstated.

A third data problem has to do with inadequate procedures for collection, processing, and dissemination of data. This situation presently exists to an extreme degree in the information systems of the EHR sector; also, interpretation of the measures of aggregate economic performance and of the government budget has become increasingly problematic in recent years. Although reforms of recent months, including the use by the GOL of operational expert (OPEX) advisors to assist in data management and fiscal control, offer a basis for optimism concerning future improvements in this area, the optimism must be balanced with conservative expectations about the extensiveness and permanence of the reforms.

An additional data issue, specific to the national budget, is the lack of availability of detailed appropriation and expenditure data on a timely basis. Also, the GOL has had an extremely difficult task in achieving its goal of eliminating extra-budgetary expenditures. While one must recognize the infrastructure and personnel limitations that exist for the GOL in achieving the goal of sound budgetary management, there will need to be a renewed professional commitment to the standards of budgetary restraint, accountability, and accuracy if the GOL is to reestablish control over its own financial systems and credibility with its external economic partners. Until these goals are accomplished one may expect a continuing problem with budget interpretation and with significant divergences between budget allocations and actual expenditures.

The issue of data limitations must be understood in the appropriate analytical context. For the economic or financial analysis to be useful does not require that the underlying data be exact but does necessitate the assumption that the congruence between the quantitative measures and the underlying reality be sufficiently approximate as not to generate misinterpretations and false inferences. It is difficult, if not impossible, to know in advance that this is the case. One is left with the responsibility to interpret all data within a framework of common sense informed by observation. Interpretation is improved when initial inferences can be examined by a variety of individuals who can provide the analyst with assistance based upon their own

knowledge and diverse experiences. This is the procedure that has been used throughout the EHR sector assessment but it probably has been most influential in the economic and financial analysis.

2.3 The Liberian Economy

The major characteristics of the Liberian economy since 1979 have been recurrent declines in the measured monetary sector (averaging minus 2.3% per year between 1980 and 1985), continuing population increase (at an estimated 3.4% or more per year), increasing financial uncertainty, and an inability to control government expenditures in line with either annual receipts or long-term expectations. Liberia is often described as having a dualistic economy characterized by a traditional agrarian subsistence sector that involves a majority of the population and an export-oriented, monetized sector that is dominated by the raw material producing concessions and by the national government. A more accurate description might be to view Liberia as consisting of three economic sectors:

1) the traditional sector wherein most production is for subsistence and the remainder (especially of coffee, palm oil kernels, and cocoa) is used as supplementary cash crops;
2) the major export-oriented production sector consisting of iron ore mining, rubber, forestry, and coffee/cocoa production; and

3) the formal service and manufacturing sector consisting of government, public corporations, and private companies.

In recent years, the traditional sector, which includes an estimated 60-70 percent of the population, has accounted for only approximately 20 percent of measured Gross Domestic Product (GDP)*, with the export sector varying between 40 percent and 60 percent depending upon international prices and volume of production.

While these three sectors interact in a variety of ways (e.g., greater prosperity in the traditional sector could improve government revenues and reduce or redistribute the demand for government services), the true economic base of the Liberian economy is in its export sector. This means that Liberia, like all other producers of raw materials, is subject to the volatility of the international markets for its products. This exposure to external economic influences has been especially dramatic in the last decade.

The international recession of the late 1970s and early 1980s resulted in a general decline in demand for Liberia's raw materials just at a time when Liberia and its competitors were increasing production in attempts to finance internal development. The result was a transitional oversupply that,

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* GDP is an estimate of the total final output of an economy by residents and nonresidents; it is calculated without making deductions for depreciation or considering the allocation of claims on the production between residents and nonresidents.

given the lack of a supply cartel, could be reduced only by lowering prices. The situation was made even worse by the continued relatively high prices for fuel and for manufactured goods that are imported for consumption and for support of the export sector. When some producers reduced or closed operations, the unemployment of workers, and their reduced income created multiplier effects throughout the economy but especially in the private and government service sectors.

Table 2.1 presents the sectoral origin of Gross Domestic Product, in current factor cost, for Liberia for the years 1981 to 1986. The agriculture sector data includes the export-oriented activities as well as any measured activities of the traditional sector. While variations took place in these years, the aggregate Liberian economy, and even the distribution among sectors, changed little.

Table 2.2 reproduces the data from Table 2.1 but deflates post-1981 data to take into account inflation. For a variety of reasons, discussed later in this chapter, inflation in Liberia has not been a significant factor over much of this period. The deflators used for each year (the ratio of current versus 1981 factor costs) were as follows:

1982 = .984
1983 = .960
1984 = .963
1985 = .961
1986 = .962

In fact, these data indicate a situation of almost constant factor prices between 1983 and 1986.

Table 2.1

Sectoral Origin of Gross Domestic Product at Current Factor Cost
(Million $L)

	1981	1982	1983	1984	1985	1986*
Agriculture	254.2	245.7	301.7	323.9	317.3	292.3
Rubber	51.9	28.8	46.5	66.6	42.1	43.6
Coffee and Cocoa	26.5	25.2	23.8	23.2	30.8	20.1
Hunting	4.7	4.8	4.9	5.0	5.1	5.2
Fishing	12.2	12.5	12.7	13.0	13.2	13.5
Poultry	2.4	2.5	2.6	2.7	2.7	2.9
Agriculture Services	8.7	12.1	12.3	11.6	13.0	12.0
Rice	67.8	71.4	109.3	112.3	108.8	90.5
Cassava	15.1	21.6	21.9	23.4	34.7	37.7
Other Crops	64.9	66.8	67.7	66.1	66.7	66.8
Forestry	42.8	39.1	32.8	34.8	35.5	42.8
Logs and Timber	30.8	26.1	18.8	19.8	19.3	25.4
Charcoal and Wood	12.0	13.0	14.0	15.0	16.2	17.4
Mining	127.4	150.3	123.2	107.4	128.3	129.6
Iron Ore	109.9	132.3	109.2	98.4	124.2	124.6
Other	17.5	18.0	14.0	9.0	4.1	5.0
Manufacturing	62.9	65.2	59.6	68.5	64.8	64.7
Electricity and Water	22.7	25.0	28.9	22.5	16.6	18.3
Construction	37.0	39.7	39.8	34.6	32.2	29.0
Trade, Hotels, etc.	59.1	74.9	70.4	62.5	60.2	56.7
Transportation, etc.	76.2	77.0	80.4	80.7	71.4	75.3
Financial Institutions, etc.	85.8	90.2	100.9	110.3	109.0	115.2
Producers of Government Services	154.4	154.9	127.1	121.7	114.4	113.0
Other Services	28.6	29.6	31.7	27.7	31.4	31.0
Less Imputed Bank Charges	13.3	16.5	17.7	24.7	20.3	19.7
GDP at Current Factor Cost	937.8	975.1	978.8	969.9	960.8	948.2
Annual Rate of Growth		3.8	0.4	0.4	-0.9	-1.3

* Preliminary
Source: Ministry of Planning and Economic Affairs, 1987.

Table 2.2

Sectoral Origin of Gross Domestic Product at Constant Factor Cost
1981 Prices (Million $L)

	1981	1982	1983	1984	1985	1986*
Agriculture	254.2	258.4	267.5	281.6	292.0	288.0
Rubber	51.9	48.6	54.1	64.7	65.0	64.7
Coffee and Cocoa	26.5	26.2	23.2	19.2	28.9	22.1
Hunting	4.7	4.8	4.9	5.0	5.1	5.2
Fishing	12.2	12.9	14.8	17.3	14.7	15.8
Poultry	2.4	2.5	2.6	2.7	2.8	2.9
Agriculture Services	8.7	9.2	9.4	9.7	9.4	9.3
Rice	67.8	71.4	73.0	74.9	72.7	72.5
Cassava	15.1	16.5	17.9	19.4	25.2	27.3
Other Crops	64.9	66.3	67.6	68.7	68.2	68.2
Forestry	42.8	39.5	37.5	41.6	47.2	54.3
Logs and Timber	30.8	26.5	23.5	26.6	31.0	36.9
Charcoal and Wood	12.0	13.0	14.0	15.0	16.2	17.4
Mining	127.4	120.9	96.0	99.4	92.0	94.3
Iron Ore	109.9	100.7	79.1	82.0	82.6	81.0
Other	17.5	20.2	16.9	17.4	9.4	13.3
Manufacturing	62.9	66.0	65.4	68.3	67.2	65.1
Electricity and Water	22.7	26.9	23.4	23.6	24.0	24.0
Construction	37.0	35.3	38.2	29.8	30.5	26.7
Trade, Hotels, etc.	59.1	68.9	67.1	56.9	57.4	52.4
Transportation, etc.	76.2	88.8	86.4	84.7	72.7	71.1
Financial Institutions, etc.	85.8	83.6	88.7	86.3	86.5	87.3
Producers of Government Services	154.4	154.9	152.5	146.0	137.3	135.6
Other Services	28.6	30.5	31.4	27.1	30.0	28.0
Less Imputed Bank Charges	13.3	12.4	14.7	11.1	13.0	13.7
GDP at Current Factor Cost	937.8	959.3	939.4	934.2	923.8	913.1
Annual Rate of Growth		2.2	-2.1	-0.6	-1.1	-1.2

* Preliminary
Source: Ministry of Planning and Economic Affairs, 1987.

Between 1981 and 1986, the percentage distribution by sector also was relatively stable. For example, agriculture varied from 27.1 percent of total GDP in 1981 to a high of 33.4 percent in 1984 and was at 30.7 percent in 1986. Forestry, which had dropped from 4.6 percent in 1981 to 3.3 percent in 1983, by 1986 had regained approximately what it lost. Forestry activities represented 4.5 percent of total GDP in 1986 and estimates are that it has maintained or increased both nominal and proportional growth over the last eighteen months.

The most dramatic change in all accounts has been the decline in government services from 16.5 percent of GDP in 1981 (reflecting the high staffing levels and salaries of that year) to 11.9 percent of GDP in 1986. Part of this represents a real decline and part represents a redefinition of certain parastatal enterprises which takes them out of the government service sector and into other sectors.

Table 2.3 shifts the attention from the origin of GDP to the expenditure of GDP (the table includes constant price estimates and thus is comparable to Table 2.2 GDP figures). Final consumption expenditure of GDP has declined from $847.3 million in 1981 to $727.7 million in 1986, a decrease of slightly over 14 percent. Most of this drop ($65.8 million) has been in government consumption, but private consumption also underwent a major decline ($53.8 million).

The most dramatic change has been the reduction in fixed investment from $193.8 million (20.2% of GDP) in 1982 to $97.9

Table 2.3

Expenditure on Gross Domestic Product at Constant Prices (1981)
(in $ million)

	1981	1982	1983	1984	1985	1986
Final Consumption Expenditure	847.3	839.8	819.0	777.9	761.9	727.7
Government	200.1	218.9	169.0	156.8	136.9	134.3
Private	647.2	620.9	650.0	621.1	625.0	593.4
Fixed Investment	179.6	193.8	188.0	152.7	113.7	97.9
Change in Stock	18.5	40.5	5.4	20.6	6.5	6.5
Exports of Goods and NFS	540.7	471.0	460.1	489.5	473.0	449.0
Total Uses:	1586.1	1545.1	1472.5	1440.7	1355.1	1281.1
Less Imports of Goods and NFS	560.9	454.0	473.1	375.1	317.4	314.6
Statistical Discrepancy	29.1	-18.3	36.5	-35.8	-28.7	25.8
GDP at Market Prices	1054.3	1072.8	1035.9	1029.8	1009.0	992.3
Less Indirect Taxes	116.5	113.5	96.5	95.6	85.2	79.2
GDP at Constant Factor Cost:	937.8	959.3	939.4	934.2	923.8	913.1

Source: Ministry of Planning and Economic Affairs, 1987.

million (10.7% of GDP) in 1986. This emphasizes an important point: the relative "stability" of GDP over recent years is actually a symptom of economic stagnation. With Liberia's rapidly increasing population and a decreasing rate of investment, a stable GDP actually indicates a substantial decline in current living standards and portends a reduced ability for redevelopment as capital investment and inventories are both allowed to decline.

The export sector is critically important to the Liberian economy. Table 2.4 presents the balance of trade in goods and services for the 1981 to 1986 time period. The major characteristic of this period is a dramatic increase in the balance of trade surplus. Even this, however, has a negative interpretation since it occurred not because of increased exports but rather because of declines in imports (especially of fuel, machinery, and transport equipment) brought about by a lack of investor confidence in the local economy, reduced domestic economic activity, and a shortage of foreign exchange.

Table 2.5 presents details on Liberian exports for the 1983-1986 period. The data is presented in terms of current values for each year and as a percentage distribution. The stability of aggregate export values is generally replicated by the stability of the percentage distribution. Iron ore declines will become more dramatic with the termination of LAMCO operations in Liberia in the near future. However, this change will be felt more in terms of employment and consumer demand than in terms of

Table 2.4

Balance of Trade in Goods and Services
($ millions)

	1981	1982	1983	1984	1985	1986
Exports of Goods	529.2	477.4	427.6	452.1	435.6	408.4
Imports of Goods	-489.1	-441.5	-366.6	-317.8	-246.6	-227.0
Balance of Trade	40.1	35.9	61.0	134.4	189.0	181.4
Exports of Non-Factor Services	11.5	10.0	38.5	36.9	34.6	N/A
Imports of Non-Factor Services	-71.8	-72.0	-112.6	-93.7	-76.2	N/A
Resource Balance	-20.2	-26.1	-13.1	77.5	147.4	N/A

Source: National Bank of Liberia, 1987.

Table 2.5

Liberian Exports
1983-1986

Export Items	1983	1984	1985	1986
		Value (millions of $)		
Iron Ore	$267.3	$279.0	$279.0	$248.4
Rubber	73.1	91.3	77.1	80.7
Logs	22.2	22.6	23.0	31.9
Coffee	18.2	13.7	27.3	16.2
Cocoa	11.5	15.3	11.2	8.9
Diamonds	17.2	10.9	4.7	6.4
Palm Products	2.7	7.4	3.4	1.1
Sawn Timber	1.3	0.9	2.2	1.2
Other Domestic	7.3	5.6	2.1	7.4
Re-Exports	6.8	5.4	5.2	6.2
Total:	$427.6	$452.1	$435.6	$408.4
		Structure (Percent)		
Iron Ore	62.5%	61.7%	64.1%	60.8%
Rubber	17.1	20.2	17.7	19.8
Logs and Timber	5.2	5.0	5.3	7.8
Coffee	4.3	3.0	6.2	4.0
Cocoa	2.7	3.4	2.6	2.2
Diamonds	4.0	2.4	1.1	1.6
Palm Products	0.6	1.6	0.8	0.2
Sawn Timber	0.3	0.2	0.5	0.3
Other Domestic	1.7	1.2	0.5	1.8
Re-Exports	1.6	1.2	1.2	1.5
Total:	100.0%	100.0%	100.0%	100.0%

Source: National Bank of Liberia, 1987.

government revenue since most LAMCO receipts were dedicated to repayment of outstanding debt to the company and thus generated few funds for Government of Liberia operations.

Because of reduced investment, debt repayment requirements, and interest obligations (on current international debt as well as that in arrears) Liberia has faced a recurrent deficit in the balance of international payments. According to preliminary estimates, the overall deficit for 1985/86 (based on a July 1 to June 30 fiscal year), was $82.5 million. Tables 2.6 and 2.7 present two scenarios for the balance of payments over the 1985/86 to 1991/92 time period. Table 2.6 estimates are based upon a "baseline scenario" which assumes continued implementation of the GOL's efforts at fiscal constraint begun in 1987. Specifically, it assumes that the GOL's wage bill will be reduced and that GOL total recurrent spending will be constant (allowing an increase in expenditures on goods and services).

The projections in Table 2.7 present a "normative scenario" developed by the International Monetary Fund (IMF). This scenario assumes a much wider range of policy reforms by the GOL as well as an expectation of the resumption of net capital inflow. The "normative scenario" is much more optimistic than the "baseline scenario" but either would require substantial improvement over recent trends. As indicated in the two tables, the overall deficit will continue at least until 1990/91. The "baseline scenario" assumes a continuing but smaller deficit after that date, whereas the "normative scenario" assumes a small

Table 2.6

Medium-Term Balance of Payments Projections
Baseline Scenario
(in millions of U.S. Dollars)

	1985/86*	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Current Account	64.7	50.2	44.0	56.2	70.9	70.0	83.4
Trade Balance	145.4	137.6	130.1	132.3	140.4	118.1	120.0
Exports, f.o.b.	(419.0)	(395.8)	(351.8)	(360.8)	(371.6)	(333.6)	(347.3)
Imports, c.i.f.	(-273.6)	(-258.2)	(-221.7)	(-228.5)	(-231.1)	(-215.5)	(-227.3)
Services (net)	-123.2	-120.9	-122.3	-121.2	-125.0	-113.1	-114.7
Of which: interest due on public debt	(-78.7)	(-86.3)	(-89.8)	(-94.7)	(-99.9)	(-104.4)	(-108.3)
Transfers (net)	42.5	33.5	36.1	45.1	55.5	65.0	78.1
Capital Account	-147.2	-181.9	-187.7	-173.2	-148.9	-128.6	-112.8
Official long-term	-24.0	(-37.7)	(-43.3)	(-37.7)	(-23.5)	(-13.6)	(-5.2)
Private	123.2	(-144.2)	(-144.4)	(-135.5)	(-125.4)	(-115.0)	(-107.6)
Overall Deficit (-)	-82.5	-131.7	-143.7	-117.0	-78.0	-58.6	-29.4
Financing	82.5	131.7	143.7	117.0	78.0	58.6	29.4
National Bank of Liberia	-39.7	-59.7	-54.1	-41.0	-28.0	-17.0	-0.7
Assets (increase -)	(3.3)	(1.1)	--	--	--	--	--
Liabilities	(-43.0)	(-60.8)	-54.1	-41.0	-28.0	-17.0	-0.7
Use of Fund credit (net)	(-42.7)	(-60.5)	(-54.1)	(-41.0)	(-28.0)	(-17.0)	(-0.7)
Other	(-0.3)	(-0.3)	(--)	(--)	(--)	(--)	(--)
Arrears (accrual +)	122.2	191.4	197.8	158.0	106.1	75.6	30.1
Memorandum Items:							
External arrears (end of period)	301.0	517.0	714.8	872.8	978.9	1,054.5	1,084.5
of which: non-reschedulable	NA	NA	(356.1)	(432.7)	(483.6)	(508.5)	(500.4)
Debt service ratio (percent of goods and services)	40.9	50.9	55.8	51.8	45.1	44.7	39.4

* Preliminary estimate

Source: International Monetary Fund, 1987.

Table 2.7

Medium-Term Balance of Payments Projections
Normative Scenario
(in millions of U.S. Dollars)

	1985/86*	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Current Account	64.7	50.2	44.0	78.5	104.7	122.4	145.7
Trade Balance	145.4	137.6	130.1	154.5	172.5	165.5	172.0
Exports, f.o.b.	(419.0)	(395.8)	(351.8)	(385.5)	(415.8)	(394.2)	(420.7)
Imports, c.i.f.	(-273.6)	(-258.2)	(-221.7)	(-231.0)	(-243.3)	(-228.7	(-248.8)
Services (net)	-123.2	-120.9	-122.3	-121.0	-123.2	-108.2	-104.4
Of which: interest due on public debt	(-78.7)	(-86.3)	(-89.8)	(-94.0)	(-96.4)	(-96.4)	(-94.4)
Transfers (net)	42.5	33.5	36.1	45.1	55.5	65.0	78.1
Capital Account	-147.2	-181.9	-187.7	-158.9	-128.2	-102.0	-94.9
Official long-term	-24.0	(-37.7)	(-43.3)	(-37.7)	(-23.5)	(-13.6)	(-5.2)
Private	123.2	(-144.2)	(-144.4)	(-121.2)	(-104.7)	(-88.4)	(-79.7)
Overall Deficit (-)	-82.5	-131.7	-143.7	-80.4	-23.5	20.4	60.8
Financing	82.5	131.7	143.7	80.4	23.5	-20.4	-60.8
National Bank of Liberia	-39.7	-59.7	-54.1	-41.0	-28.0	-17.0	-0.7
Assets (increase -)	(3.3)	(1.1)	--	--	--	--	--
Liabilities	(-43.0)	(-60.8)	-54.1	-41.0	-28.0	-17.0	-0.7
Use of Fund credit (net)	(-42.7)	(-60.5)	(-54.1)	(-41.0)	(-28.0)	(-17.0)	(-0.7)
Other	(-0.3)	(-0.3)	(--)	(--)	(--)	(--)	(--)
Arrears (accrual +)	122.2	191.4	197.8	121.3	51.5	-3.4	-60.1
Memorandum Items:							
External arrears (end of period)	301.0	517.0	714.8	836.1	887.6	884.2	824.1
of which: non-reschedulable	NA	NA	(356.1)	(414.5)	(442.1)	(445.6)	(399.7)
Debt service ratio (percent of goods and services)	40.9	50.9	55.8	48.7	40.0	37.0	30.5

* Preliminary estimate

Source: International Monetary Fund, 1987.

but growing payments surplus beginning in 1990/91. As of early 1988, both sets of projections appear more optimistic than the current situation would justify but the ultimate determinant of the future balance of payments structure is how successfully the GOL can convert its fiscal policy pronouncements into actual government practices.

Preliminary data on a variety of economic indicators for 1987 offer some basis for optimism. Total imports have been increasing during the last quarter of 1986 and by the end of 1987 were dramatically higher than in the last three years. A significant factor in the import increase is the amount of goods imported for transhipment (reflecting improved economic circumstances for Guinea, a major recipient of such transhipments).

Unfortunately, exports continued to decline and, with the exception of timber activities and projections of future improvements in rubber output and prices, the export sector remains depressed. Since, as noted above, Liberia remains an export-dependent economy, little substantial aggregate improvement can be expected to occur until this sector improves. Domestic revenue (taxes, royalties, and maritime revenues) increased from mid-1986 to the end of 1987, but this appears to be more a result of improved collection procedures than of an increase in the economic activity of the nation.

During most of the period from 1981 to 1987, the artificially high value of the United States dollar (which is

both a standard of exchange and a legal currency in Liberia) made the nation's exports more expensive on the international market and imports less expensive (with the result that imports, even at reduced levels, have equalled almost 50% of GDP). From 1980 to 1985 per capita GDP declined from $620 to $479. It also is estimated that the purchasing power of individuals declined during this same period by approximately 25 percent.

In the traditional sector, the impact of these changes was felt primarily in terms of lower prices for cash crops and reductions in the quality and amount of government services (especially in education, health, and agricultural extension). The effect on the modern service sector was even more dramatic since these economic operations represent a derived demand from the other two sectors. Since 1978, the government has failed in its efforts to control its fiscal activities and to exercise the necessary management oversight over budgetary receipts and expenditures.

Since 1978, the normal management problems of a developing country government have been exacerbated in Liberia by individual corruption (tax evasion and overbilling by vendors), political patronage, and the lack of effective management information systems. The resultant pattern of government deficit spending has led to the incurring of debt beyond the GOL's capacity for repayment. The continued failure to meet expenditures with revenues has meant that the GOL frequently has been unable to meet its current salary obligations to its own civil servants and

the vendors who provide government supplies and equipment. As of September 1987, domestic arrears of the GOL stood at $65.1 million. In addition, the GOL external debt on June 30, 1987, stood at $1.483 billion; debt arrears equalled $538.8 million, of which $171 million represented past-due interest payments. Both the World Bank and the International Monetary Fund (IMF) have suspended financial assistance to the GOL because of the government's failure to service its debt; assistance from the United States Agency for International Development (USAID) has only barely avoided similar discontinuance.

Two other monetary actions have led to further damage to investor and consumer confidence: the substantial increase in the Liberian currency and the temporary practice of issuing GOL checks without sufficient funds in the accounts upon which these checks were drawn. The latter activity created a temporary banking crisis in that banks refused to clear checks or to make new loan funds available to borrowers. The expansionist monetary policy, however, has had even more substantial effects on the economy.

Officially, Liberian currency (issued in $5, $1 and smaller coins) is circulated at par with the American currency and did so for years even though there was little external convertibility of the Liberian currency. However, in the last two years the two currencies have been allowed to diverge in value so that now 1.5 to 1.8 Liberian dollars are exchanged for an American dollar in the informal currency market. It is appropriate to remember that

this devaluation of the Liberian currency has occurred simultaneously with a decline of the American dollar against most other international currencies.

The lack of international convertibility of the Liberian coins is a major cause of their decline, but this would not be such a serious problem if the GOL could guarantee domestic convertibility at par, or if the demand for local goods and services were sufficiently large to justify the quantity of coins in circulation. However, the GOL knowingly inflated its currency between 1982 and 1988 as a means of meeting local obligations. The GOL released approximately $57 million in 5-dollar coins between 1982 and 1986 and followed this with an additional $13 million in 1987.

This situation, combined with the aforementioned problems with exports and fiscal control, has meant that the GOL cannot guarantee local convertibility. At the same time, economic uncertainty has undermined local investor and consumer confidence so that some estimates suggest a 4:1 or 5:1 relationship between capital sent out of Liberia versus that invested domestically; these developments have occurred simultaneously with a slowing (until recently) of domestic consumer demand.

Under the current financial conditions one would expect to observe a classic situation of the type described as "Gresham's Law", namely, that when two currencies of differing exchange value exist simultaneously, the "good" currency would be hoarded and the "bad" currency would be spent. In Liberia, this is

exactly what has happened. The American dollar is saved and, where possible, used to buy foreign goods or sent abroad for investment. The Liberian dollar in contrast is spent locally and, over time, at an increasingly lower value relative to the American dollar.

In fact, it can be asserted that the increased availability of the Liberian coins has encouraged the development of other economic problems. First, it facilitates capital flight through allowing convertibility of the local currency (albeit at a discount) into an internationally accepted currency. Second, it has diminished the purchasing power of those Liberians who receive their income in Liberian currency but who consume imported goods. The observed escalation of prices of imported commodities has occurred because businesses, which must accept the Liberian currency, have needed to adjust their nominal prices for the real divergence between the purchasing power of the American and Liberian currencies. For the fiscal year 1985/86 capital flight was estimated at US$100 million, or 14 percent of that year's GDP.

Again, the traditional agriculture sector has been the least affected by these events. However, the decline in agricultural extension assistance will result in a continuance of agricultural practices (especially the slash-and-burn system of land clearing) that can only accelerate the depletion of Liberia's soil and will result in an eventual decline in the productivity of this sector.

The major immediate effect on this sector has been in the decline in receipts for cash crop production.

Mining, manufacturing, construction, and related activities have all suffered declines in recent years; the announced closing of LAMCO's mining activities is only the most dramatic indication of recent problems (the LAMCO termination is related to the exhaustion of those iron ore holdings that are exploitable at current world prices). The private service sector (including restaurants, hotels, transportation, and local trade) has suffered less than the rest of the private sector because its demand is dependent primarily on economically advantaged Liberians and the international community in Liberia. Even so, this sector is estimated to have declined by 17 percent between 1980 and 1986.

Finally, government services have been hit most severely. At a time when only 35 percent of the Liberian population has access to health care services and infant mortality is at 127 per 1,000 (child mortality rates are estimated at 300 per 1,000), the Ministry of Health budget has declined every year since 1983. In the Ministry of Education (MOE), operational expenditures have fallen from $28.0 million in 1984/85 to $20.7 million in 1986/87. In 1986, the school enrollment was estimated at over 255,000 but this is only 34 percent of the school-age cohort. Enrollments are estimated to have declined every year between 1981 and 1987.

With declining budget expenditures and constant (or in some cases, such as the MOE, increasing) personnel levels, the GOL's

operations have become dominated by a personnel driven budget that leaves few funds for communications, transportation, support equipment, materials, maintenance, or new construction. As a result, much of the physical facilities and transportation/ communication infrastructure of Liberia has suffered a serious decline.

Since 1986, the GOL has developed a three-part program to deal with the economic and fiscal crisis it faces. First, in the traditional sector, the GOL has proposed initiation of a "Green Revolution" to promote attainment of self-sufficiency in food. Second, the Ministry of Planning and Economic Affairs (MPEA) has initiated an Economic Recovery Program for the 1986-89 period that is designed to reduce the trade and budget imbalances of recent years. Third, an Executive Order issued on March 24, 1986, calls for the privatization of eleven public corporations:

1) Liberia Produce Marketing Corporation
2) Liberia Electricity Corporation
3) Liberia Petroleum Refining Company
4) Liberia Telecommunications Corporation
5) Liberia Water and Sewer Corporation
6) National Port Authority
7) Monrovia Transit Authority
8) Mesurado Companies Group
9) Air Liberia
10) Hotel Africa
11) Ducor Hotel

In each case, the initial expectations of how quickly these reforms could be achieved were too optimistic. The $100 million planned for investment in ten nuclear estates for the "Green Revolution" has not yet been made available. The Economic Recovery Program has been slowed by bureaucratic resistance to civil service and fiscal/monetary reforms, and the privatization policy has faced initial investor cynicism about the long-term commitment of the GOL to economic reform and budgetary restraint.

However, the framework does exist for improvement. Liberia does possess material and human resources that, in the proper social and economic environment, could lead to a substantial enhancement of economic performance. If the GOL can regularize its relationships with donors (and especially with the World Bank and IMF), then one could once again become optimistic about Liberia's future opportunities. Before that occurs, however, the GOL has severe challenges to face and difficult and often painful decisions to make. Granting the GOL's willingness to pursue a course of fiscal constraint and budgetary responsiveness, there will be a concomitant need for long-term donor assistance in debt refinancing and in reestablishing the GOL's agriculture, health, and education services on a rational and efficient basis.

2.4 Fiscal Capacity Analysis

A crucial consideration in any assessment of the EHR sector is the financial ability of the government of a nation to sustain its existing program and to absorb new capital and recurrent

costs which would result from any education and training initiatives. Normally in this section, a more detailed review would be made of the GOL's current and projected budget levels. A second activity would be to analyze the current and projected education and training enrollment figures and to derive from these projections of EHR cost burdens on the GOL. Finally, a summary judgement would be made of the GOL's fiscal capacity, and recommendations derived concerning the appropriate strategies to be pursued in light of these findings.

In the case of Liberia in 1988, however, this exercise is both inappropriate and unnecessary. It is inappropriate because there is no basis, either in terms of recent trends or hypothetical scenarios, for assuming that the marginal fiscal capacity of the GOL or the MOE will increase in real terms in the immediate future. Between now and at least 1992, any increases in revenue net of increases in expenditures would have to be applied to meet existing domestic and international arrears and ongoing recurrent costs.

In addition, a large potential new burden for the GOL exists in terms of those projects currently on the PL-480 funding list that are scheduled to evolve into GOL programs during the next five years. An implication of this evolution is that the GOL is to assume the recurrent operating costs of the former projects within the operating expenditure budget. In summary, the GOL cannot at present meet its existing obligations and for at least the next five years will be under extreme pressure just to meet

the normal recurrent cost obligations created by existing programs and projects. Because of this, the MOE as the implementing agency for most pre-tertiary education and training can expect little if any financial assistance that could be directed toward new recurrent obligations.

Thus, even if negative fiscal capacity projections were not methodologically inappropriate, there is no need for them since the MOE can be assumed to have no marginal (new) fiscal capacity. The implications of this situation for the MOE and its programs are discussed below. In addition, an attempt is made to identify a course of action for the MOE to pursue under these adverse budgetary conditions. Before proceeding to that discussion, however, a review of the GOL fiscal accounts will be made.

2.4.1 GOL Fiscal Accounts

Table 2.8 presents the major categories of government fiscal operations for the fiscal years 1980/81 to 1986/87. The GOL fiscal year was from July 1 to June 30, but in 1987 a special six-month budget period was created from July 1, 1987, to December 31, 1987. Beginning with January 1, 1988, the GOL fiscal year will be the same as the calendar year. The data in Table 2.8 are in current dollars (that means unadjusted for differences in purchasing power over time), the 1985/86 figures are preliminary figures subject to revision, and the 1986/87 figures are estimates. Since December 1982, local inflation (as measured by the Monrovia Consumer Price Index) had been slight until 1986 when prices increased by 9.1 percent in reaction to the

aforementioned currency changes. However, United States dollar equivalent prices at the de facto exchange rate appear not to be increasing rapidly.

As is indicated in Table 2.8, there has been a serious deterioration in the level of GOL revenues and grants since FY 1980/81. There has been a 13 percent decline over the time period through June, 1987, with almost a 25 percent decline in the grants category. Unfortunately, there has not been a corresponding drop in expenditures, with the result that the overall deficit (on a commitment basis) was at $156.7 million in 1986/87, or 74.5 percent of total government revenues and grants, and 17.5 percent of the 1986/87 estimated GDP of 894.4 (adjusted to match the GOL's fiscal year).

The increase in recurrent costs since FY 1980/81 has been driven by the escalation of interest payments from $32.2 million in that year to $96.4 million in FY 1986/87. Development expenditures have declined from $124.2 million to $53.3 million during the same period indicating the damaging effect of the economic crisis on those activities. The non-budgetary expenditures item has been an especially troublesome one for the GOL in that it represents expenditures for which no allocation was authorized originally in the budget. Even where such expenditures can be shown to be appropriate, they represent a failure of the budget planning system. When they occur year after year (and reach $21.4 million as they did in FY 1984/85--almost 10 percent of the total revenues and grants) these

Table 2.8

Government of Liberia Fiscal Operations
FY 1980/81 - 1986/87
(in millions of $)

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87
Total Revenue & Grants	242.4	279.3	257.4	260.1	217.0	205.6	210.4
Revenue	217.9	237.9	224.4	224.1	194.5	180.1	192.4
Grants	24.5	41.4	33.0	36.0	22.5	25.5	18.0
Total Expenditures	375.1	370.6	390.1	340.4	382.6	310.4	367.1
Recurrent	236.4	287.6	261.0	238.5	231.2	224.4	255.2
Wages & Salaries	(138.1)	(157.7)	(135.8)	(126.3)	(121.9)	(108.9)	(113.3)
Interest	(32.2)	(37.8)	(57.1)	(60.1)	(70.0)	(80.3)	(96.4)
Other	(66.1)	(92.1)	(68.1)	(52.1)	(39.3)	(35.2)	(45.4)
Development	124.2	96.4	95.8	73.1	72.0	41.6	53.3
Non-budgetary	7.8	11.6	17.2	11.0	21.4	7.6	11.1
Unallocable	6.7	(25.0)	16.1	17.8	58.0	36.8	47.5
Overall Deficit (commitment basis)	132.7	91.3	133.0	80.3	165.6	104.8	156.7
Identified Expenditures related to arrears	7.2	(6.0)	8.0	(7.0)	66.7	41.1	94.6
Overall Deficit (cash basis)	125.5	97.3	125.0	87.3	98.9	63.7	62.1

Source: International Monetary Fund based on GOL reports, 1987.

expenditures indicate a lack of commitment to responsible budget management.

The GOL deficit is distinguishable between the aggregate deficit (based upon commitments) and the cash deficit actually financed in the year it was incurred. In all years except 1981/82 and 1983/84, the cash deficit was less than the commitment deficit thus indicating that debt arrears were being accumulated. In 1986/87, arrears equalled $94.6 million; this was 60.4 percent of the total commitment deficit, 45.0 percent of total GOL revenues and grants, and 10.6 percent of GDP.

Table 2.9 presents detail on the FY 1986/87 GOL budget, both estimated and actual. The table indicates the difference between the original budget estimates and the actual expenditures. The table indicates again the continuing difficulty of the GOL in controlling expenditure items (especially personnel services) and of attaining anticipated revenue levels. All actual revenue and grant items were less than expected, with the exception of funds from the Public Law (PL) 480 program sponsored by the U.S. Government. The average difference between actual and estimated receipts was -26.4 percent. Expenditures also declined, but only 14.4 percent on average. Four categories (personnel services, debt services, domestic arrears, and non-budgetary expenditures) actually increased. The result was a deficit of $44.22 million, or 16.4 percent of total revenues and grants.

Table 2.10 presents the estimated components of the special interim budget for the period July 1 - December 31, 1987. Table

Table 2.9

GOL Operations Budget
Estimated versus Actual Receipts and Expenditures, 1986/87
($ million Liberian)

Item	1986/87 Estimate	1986/87 Actual	Difference	Percent Difference
Revenue and Grants				
Domestic Revenue	$209.61	$189.25	$-20.36	-9.7%
Cash Grants	28.20	18.00	-10.20	-36.2
Loans	60.20	29.24	-30.96	-51.4
PL-480	20.00	28.05	+8.05	+42.5
Policy Measures	23.01	-0-	-23.01	-100.0
Other Receipts	25.35	-0-	-25.35	-100.0
Total:	$366.37	$269.50	$-96.87	-26.4%
Expenditures				
Recurrent	$257.81	$257.29	$ -.502	-0.2%
Personnel Services	98.31	108.94	+10.63	+10.8
Support Services	95.30	35.16	-60.14	-63.1
Debt Services	58.20	61.24	+3.04	+5.2
Domestic Arrears	6.00	39.48	+33.48	+558.0
Non-Budgetary	-0-	12.47	+12.47	-0-
Total:	$366.37	$313.72	$-52.65	-14.4%
Deficit:	-0-	$ 44.22	$+44.22	

Source: GOL, Bureau of the Budget, 1987.

Table 2.10

Estimated Revenue and Expenditures
July 1 - December 31, 1987
($ million Liberian)

Revenue		Expenditures	
Taxes and International Trade	$33.5	Personnel Services	$62.2
Taxes on Income and Profit	35.1	Support Services	13.1
Taxes on Property/ Capital Transactions	2.6	Debt Services	14.9
Taxes on Domestic Production/ Consumption	23.8	General Government	21.5
General Licenses/Misc. Taxes	3.4	Development	45.2
Non-Tax Revenue	3.0		
External Receipts	55.9		
Total:	$157.3		$157.3

Source: GOL, Bureau of the Budget, 1987.

2.11 indicates the difference between the estimated and actual receipts and expenditures in the first half of the interim budget period, July 1-September 30, 1987. While once again the proposed budget indicates a balance of receipts and expenditures, actual budget activities in the July-September period indicate a shortfall of $19 million in receipts but a less than proportional containment of expenditures in the amount of $8.8 million. While personnel costs appeared to be under control for the first time, debt servicing and domestic arrears payments were significantly larger than anticipated originally.

The FY 1988 budget is not yet available but preliminary estimates indicate an expenditure level of $285.8 million, of which $59.7 million is earmarked for development. The GOL Bureau of the Budget has established as its major goals for FY 1988 the increased control over expenditures (especially personnel costs and extra-budgetary expenditures) and the more efficient collection of revenues. The personnel wage bill, estimated now at $105 million per annum, is still excessive given the GOL's anticipated receipts. Civil Service reform generally, and the recent job inspection exercises specifically, hold out some hope for control if not further reduction of this item. Control of the extra-budgetary expenditure item will require fiscal and political constraint, both of which have been inadequate in the past.

Table 2.11

GOL Budget
Actual versus Estimated Receipts and Expenditures
July 1 - September 30, 1987
($ million Liberian)

Item	Estimate	Actual	Difference	Percent Difference
Revenues				
Taxes	$46.6	$46.2	$ - .4	- 0.9%
Licenses/Misc.Taxes	1.8	1.3	- .5	-27.8
Non-Tax Revenue	3.3	3.4	+ .1	+ 3.0
External Receipts	24.6	6.4	-18.2	-74.0
Total:	$76.3	$57.3	$-19.0	-24.9%
Expenditures				
Personnel Services	$31.2	$24.2	$ -7.0	-22.4%
Support Services	6.5	0.3	-6.2	-95.4
Debt Services	7.5	9.6	+2.1	+28.0
General Government	6.5	2.6	-3.9	-60.0
Domestic Arrears	2.0	21.2	+19.2	+960.0
Development	22.6	9.6	-13.0	-57.5
Total:	$76.3	$67.5	$ -8.8	-11.5%
Deficit:	-0-	$10.2	$+10.2	

Source: Calculations made from GOL Bureau of the Budget data.

2.4.2 Ministry of Education Budget

Table 2.12 presents the 1985/86 MOE budget by expenditure category; 1985/86 is the last year for which complete revised estimates are available. Initial estimates for 1986/87 also are provided in Table 2.12, but these should be treated with great caution. As has been shown earlier, significant disparities occur between budgeted allocations and the actual expenditures.

The MOE budget is difficult to interpret for a variety of reasons. First, even the revised budget estimates of appropriations are likely to be only approximations of expenditures. For example, for the first six months of 1986, the following divergence occurred between appropriations and expenditures in the MOE's functional accounts:

Account	Appropriation	Expenditure
Personnel Services	$7,782,068	$8,302,567
Consumable Supplies	146,877	74,957
Other Services and Charges	1,294,647	1,572,833
Machinery and Equipment	282,353	293,385
Subsidies and Scholarships	2,813,609	2,095,479
Total:	$12,319,554	$12,339,221

What these figures indicate is that, at best, the original budget amounts established some sense of spending priorities and, at worst, are largely irrelevant to spending decisions. An example of the latter is the situation wherein personnel services are obligations that cannot be cut back in the short-run (except through incurring salary arrears), while other accounts--such as "subsidies and scholarships"--can simply not be paid if funds are unavailable. What is more surprising is that, in the

Table 2.12

Ministry of Education Budget Appropriations
1985/86 - 1986/87

Expenditure Category	Estimate 1985/86	Revised Estimate 1985/86	Estimate 1986/87
Personnel Services	$23,428,515	$18,150,693	$18,150,693
Contractual Services	4,000	4,000	3,000
Consumable Supplies	549,992	549,992	571,991
Other Services/Charges	9,074,216	9,274,216	8,488,971
Machinery and Equipment	100,282	304,714	400,000
Subsidies and Scholarships	3,403,267	3,403,267	4,372,227
GOL	800,000	800,000	1,800,000
External Assistance	-0-	-0-	2,350,000
Total:	$37,360,272	$32,486,882	$36,136,882

Source: The Budget of the Government of Liberia, 1986-87, Bureau of the Budget, 1986.

above example, total expenditures for the MOE actually increased in aggregate but two of the categories--"consumable supplies" and "subsidies and scholarships"--declined anyway, with most of the difference accounted for by increases in "personnel services" and "other services and charges."

Returning to Table 2.12, other reasons for problems of interpretation relate to inconsistent reporting formats (sometimes by administrative divisions and other times by functional accounts), an inability to distinguish in some reports whether figures are for appropriations or actual expenditures and, finally, simple errors of transcription and mathematics. The largest problem, of course, is that both budget appropriations and expenditure estimates are meaningless without data on the detailed use of the funds. The MOE is not alone in having these problems but the problems present especially frustrating conditions in a Ministry that employs such a significant proportion of civil service staff, represents approximately 12 percent of the GOL's recurrent budget, and has such a substantial potential for affecting the future development of the nation.

One thing that should be remembered is that personnel services are the major component of MOE operations. These services make up 95.5 percent of the 1986/87 budget for instructional activities and 74.6 percent of the total MOE operational budget. It may be assumed that final expenditure data for 1986/87 will reveal an even larger percentage for

personnel services because of the political priority this item receives and the short-run difficulties of controlling personnel obligations.

What is more disturbing is that during the 1984/85 to 1986/87 time period, when operational expenditures for education were reduced by almost 24 percent and enrollment is estimated to have declined to just over 255,000 pupils, the number of teachers and non-instructional personnel in the MOE have both increased. The teacher issue is a difficult one because one cannot terminate or reallocate teachers as enrollments decline or shift without leaving some schools unserviced. However, it is hard to understand why new teachers are being recruited at a time when instructional support and educational materials do not exist to allow the present staff of teachers to fulfill their responsibilities.

A different view of the MOE 1986/87 budget is presented in Table 2.13. There, the MOE budget is presented by major activity rather than by functional account. The MOE operates with six major categories of activities:

Category	1986/87 Estimate of Expenditure	Percent of Total
Instruction	$23,557,867	65.2%
Planning/Development	359,998	1.0
Subsidies/Scholarships	4,052,315	11.2
University of Liberia	5,316,665	14.7
W.V.S. Tubman College	872,824	2.4
Administration	1,977,213	5.5
Total:	$36,136,882	100.0%

While the University of Liberia and W.V.S. Tubman College of Technology are included in the MOE budget, they operate as relatively autonomous institutions in terms of both financing and operations.

Table 2.13 presents some interesting expenditure information. For example, the Monrovia Consolidated School System (MCSS) allocation of $3,033,176 represents 12.9 percent of the total instructional budget. The support of Booker Washington Institute (BWI) also represents a sizable MOE contribution.

While operational problems at BWI (discussed elsewhere in this assessment) may raise future questions about the efficiency of this support, the MCSS assistance is easier to rationalize given the recent increase in the rate of migration of the student population to Monrovia. However, there is a need to monitor MCSS operations to ensure that the higher per student expenditure on MCSS does not create inequities relative to more rural schools and thus reinforce the incentives for urban migration.

The subsidies/scholarships area illustrates the reason for the earlier warning about the use of allocation estimates such as these. Reports from private schools suggest that allocation of subsidy funds to schools was not in line with their expectations based on the budget appropriations. The subsidies for 1986/87 were intended to be as follows:

School Subsidies	$1,960,605
Cuttington University College	645,643
Non-Government Organizations	44,204
West African Examinations Council	378,000
Total:	$3,028,452

Table 2.13

MOE Budget by Category of Activity
Estimates of Expenditure, 1986-87

Category		Expenditure Estimate
Instruction		
Direction and Management		$ 311,623
Regional Supervision		16,166,764
Professional and Technical Education		330,557
Curriculum Development/Student Personnel Services		193,087
Liberia/Sweden Vocational Training Center		133,773
Voinjama Multilateral High School		336,411
Zwedru Multilateral High School		229.758
Kakata Rural Teacher Training Institute		247,928
Zorzor Rural Teacher Training Institute		236,846
Monrovia Consolidated School System		3,033,176
Community Schools		50,964
Adult Education and Literacy		42,958
In-Service Training		41,078
Booker T. Washington Institute		1,902,944
Liberian Opportunities Industrialization Center		300,000
	Total:	$ 23,557,867
Planning and Development		
Direction and Management		$ 172,026
Educational Planning Unit		38,890
Project Implementation Unit		81,014
Educational Facilities Unit		68,068
	Total:	$ 359,998
Subsidies and Scholarships		
Subsidies and Special Commitments		$ 3,028,452
Scholarships		1,023,863
	Total:	4,052,315
University of Liberia		
Direction and Management		$ 2,416,665
Instruction		1,900,000
Development		1,000,000
	Total:	$ 5,316,665

Table 2.13 (continued)

MOE Budget by Category of Activity
Estimates of Expenditure, 1986-87

Category		Expenditure Estimate
W.V.S. Tubman College of Technology		
Direction and Management		$ 334,145
Instruction		288,679
	Total:	$ 872,824
Administration		
Direction and Management		$ 139,822
Fiscal Affairs and Personnel		1,837,391
	Total:	$1,977,213
	MOE Total:	$36,136,882

Source: The Budget of the Government of Liberia, 1986-87, Bureau of the Budget, 1986.

A question that arises relative to the University of Liberia and W.V.S. Tubman College of Technology allocations is why instructional cost is such a relatively small percentage of expenditures. For the University of Liberia, instructional expenditures are budgeted at $1.9 million or about 44 percent of the total nondevelopment budget of $4.3 million. Similarly, for W.V.S. Tubman, the instructional component is only 33.1 percent of total estimated expenditures. There may be a justifiable rationale for this but the pattern of expenditures between instructional and non-instructional activities is unusual even for African higher education.

These data help raise a key point in the discussion of GOL fiscal capacity for MOE activities. In a nation that is in a cycle of recurrent balance of payments and fiscal deficits and faces a major challenge to rationalize both its staffing and expenditure procedures, it is inappropriate to discuss the fiscal capacity for new programs. The MOE will face a major challenge in the next five to ten years in that real expenditure levels will increase little, if at all and per student expenditure levels may even decline (unless parents and children abandon public schooling in large numbers).

The MOE has two major alternatives it can exploit in meeting this challenge. The first is to reallocate its budget so that the expenditures it already is making will begin to have more instructional impact. Improved supervision and increased availability of instructional support materials are the keys to

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such a reallocation effort. While it may be politically impossible to reduce the aggregate teaching staff, every effort should be made to ensure that teachers receiving pay are actually teaching and that teacher assignments reflect school requirements and the training and experience of the teachers.

Other expenditure activities of the MOE, including subsidies and scholarships to the private sector, should take a lower priority until the public school operations have attained an acceptable level. As was noted above, the personnel-dominated budget of the MOE does not give its administrators much latitude in budget reallocation, but nevertheless, an effort must be made.

The second alternative, which is not mutually exclusive with the first, is to expand private financing of education in both the public and private sectors of education. However, to be successful, the financing scheme must not have the inherent disincentives of the current school fee scheme (discussed in detail later in the cost section of this chapter). To be effective, it will be necessary to give authority for collection and disbursement of these funds to a local community authority (with school principals as ex officio members). This local authority would have responsibility for collection and disbursements of school fees within guidelines established by the MOE. All authority actions would be subject to audit by CEOs/DEOs. Without this structural change, there appears little probability that the fee system can become more than an incentive for inexact enrollments reporting and bureaucratic malfeasance.

As noted earlier, the situation in Liberia does not lend itself to traditional methods of projecting fiscal capacity. As also was indicated earlier, the GOL's fiscal operations have been in continuous deficit since 1979, with the average deficit for the three years preceding the 1987 interim budget equal to $142.4 million. The GOL budget has not approached a balance in either cash or commitment terms since 1977/78. Any projection of trends for either the GOL budget or Liberian national accounts would indicate a total lack of marginal fiscal capacity (the ability to assume responsibility for new recurrent costs) and raises serious questions about the GOL's ability to maintain current services.

Table 2.14 presents four scenarios for the 1988 budget prepared by the Technical Subcommittee of the GOL Budget Committee. The four assumed scenarios are as follows:

1) Scenario I: Assumes no change in GOL policies and constant domestic revenues and expenditures from FY 1986/87;
2) Scenario II: Assumes improved revenue collection measures resulting in an increase in revenues to 21 percent of GDP, $5 million from the commodity import program (CIP), and expenditures of $5 million for executive salary increases, $5 million for civil service reform, and $3.5 million for redemption of savings bonds;
3) Scenario III: Assumes a balanced budget, with revenues at the level of Scenario II and expenditures reduced to match that revenue level; and

4) Scenario IV: Assumes a balanced budget, with revenues at the level of Scenario I plus the $5 million CIP receipts and expenditures reduced to match that revenue level.

Of the four scenarios, number IV is the most fiscally conservative overall, even though Scenario I assumes lower revenues (because of the exclusion of CIP funds). However, Scenario IV would require a reduction in expenditures of $11.5 million relative to Scenario III, $36.3 million from Scenario I, and $49.7 million from Scenario II. There is nothing in the current political situation or the recent fiscal history of the GOL to suggest that this type of constraint is feasible. The best that can be hoped for realistically is that FY 1988 will see a reduction in the size of the current deficit and the establishment of a management budget that actually monitors and controls expenditures in line with stated priorities. It is unlikely that real (1981 purchasing power) government expenditures, in a balanced budget, can attain 1981/82 levels ($287.6 million recurrent and $370.6 million total) in the next three years.

The specific fiscal capacity of the MOE is even more problematic. Having incurred a significant reduction in operating funds, the MOE will face severe financial constraints in the next five years and probably beyond. Given the continuance of a personnel-dominated budget and the dramatic constraints on effective management (lack of incentives and

Table 2.14

Government of Liberia Budget Scenarios
Fiscal Year 1988
($ Millions Liberian)

Item	Scenarios I	II	III	IV
Revenues/Grants				
Domestic Receipts	$189.5	$202.7	$202.7	$189.5
External Assistance	8.7	13.7	13.7	13.7
Total:	$198.2	$216.4	$216.4	$203.2
Expenditures				
Personnel	$131.7	$121.7	$111.7	$111.7
Support Services	30.0	50.0	36.5	30.0
General Government	25.0	28.5	15.5	15.5
Debt Service	25.0	25.0	25.0	20.0
Development	27.7	27.7	27.7	26.0
Total:	$239.4	$252.9	$216.4	$203.2
Deficit:	$41.2	$36.5	-0-	-0-

Source: Calculations based on Bureau of the Budget estimates.

information being two of the most serious constraints), it simply is impossible to generate any but the most pessimistic projections concerning MOE's ability to fulfil its existing responsibilities, let alone to consider the capacity to accept new financial and management obligations. The MOE suffers and will continue to suffer from the financial and managerial inadequacies of the general GOL environment; added to these are the problems specific to a highly visible Ministry subject to external public questioning of its operations and internal employee (especially teacher) dissatisfaction with wages and working conditions.

The plight of the MOE is indicated by the need, in FY 1992, to absorb the operational costs of its Primary Education Program (PEP). The end of financial assistance in 1992 will result in an immediate GOL obligation for $310,000 per year (at 1987 prices) for materials and support costs for the PEP activities. Other costs, for further training and supervision, will be in addition to this but exist, in part, as a matter of better utilization of personnel costs for which the MOE is already obligated.*

However, the purpose of this analysis must not be simply to document the difficult situation that exists. Consideration must

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* As noted earlier, the PEP case for the MOE is simply an example of the more complex problem faced generally by the GOL as projects currently financed by PL-480 funds end their "project" status and become GOL programs. Without proper planning, these programs simply are not absorbable within the current budget expectations. The case of the Liberian Rural Communications Network (LRCN) after the Rural Information Systems Project ends is a dramatic example of this problem.

be given to what can be done, even if what is feasible is not all that one would desire to do. In the discussion that follows, separate recommendations will be made in terms of the economy, the GOL budget, and the MOE budget.

The Economy. The three-part program already instituted, embodying the "Green Revolution," the MPEA's Economic Recovery Program, and the privatization of public corporations, contains the major reforms necessary to strengthen Liberia's international balance of payments and its domestic economy. Increased self-sufficiency in the traditional sector will reduce pressure for urban migration and strengthen local communities in the rural areas. The Economic Recovery Program should stimulate Liberia's export-based modern sector and, in time, produce increased income available to support the government and private services sectors. In addition, successful implementation of the Economic Recovery Program will improve the investment conditions in Liberia for both foreign and domestic investors. An end to capital flight and a reinitiation of foreign investment in Liberia would signal the beginning of the end for Liberia's current economic crisis.

The privatization policy is a means by which some domestic and foreign capital can be mobilized immediately. While the privatization process must move at a careful pace to ensure protection of Liberian interests, the sooner these enterprises are privatized the sooner new capital investments in them can be made. Through new capital, better marketing and improved management, the newly privatized enterprises have the opportunity

of generating new tax revenues for the GOL rather than remaining a source of continued budget deficits.

The GOL Budget. The major need to improve the GOL budget situation requires increased fiscal restraint until improvements in the economy and enhanced revenue collection procedures finally match expenditure obligations. The existence of substantial international and domestic arrears will prevent easy or immediate attainment of a balanced budget. A more professional approach to expenditure control is needed to avoid abuses of unsubstantiated voucher payment requests, nonexistent or unproductive employees, and the continuance of extra-budgetary expenditures as a standard GOL practice.

The need for civil service reform is a paramount consideration but will take several years to enact, even if begun immediately. There must be resistance to the temptation to inflate the domestic money supply through the issuance of new quantities of coinage. Unlike the situation five years ago, new increases in Liberian currency now would not simply replace American currency but undoubtedly would result in an aggravation of the inflationary pressures that reappeared in 1986.

Within its budget, the GOL must give joint priority to those infrastructure development activities that will encourage increased investment in the economy and to stabilization and maintenance of basic social services such as health, agricultural extension, and education. The MOE must receive funding sufficient to meet its responsibilities but contingent on

evidence of its ability to implement and sustain successful program activities.

The MOE Budget. The MOE will continue to face an austerity budget for at least the next five years. The imbalance between the resources available to the MOE and the demands placed on it by the students and other clients it attempts to serve, will be difficult to deal with but impossible to ignore. The imbalance will require that the MOE develop priorities which will not please everyone and may well displease even those who work within the Ministry itself.

The major priority should be to salvage primary education programs and to reestablish the confidence of parents and children in the primary education system. It is important that these improvements not be restricted to Monrovia or to the other urban centers. Excess capacity does exist in Liberian primary education and this will allow some increased participation without significant cost increases; however, the excess capacity primarily exists in the more rural schools and only rarely in those of the urban areas.

A factor related to the issue of excess capacity of the primary system is the issue of teacher assignment. Emphasis should be placed on improved data on enrollments and teacher utilization. With this data an analysis can be conducted to identify which teachers should be relocated and what areas should receive them. This data/analysis activity will require grant-

funded donor assistance to revitalize both the data collection and assimilation activities of the MOE.

Other programs, such as secondary and vocational/technical education, should receive attention to the extent that internal efficiency can be enhanced without an increase in funding. The GOL budget for higher education (direct funding of the University of Liberia and the College of Technology and subsidies to Cuttington University College) should be stabilized and new funding sought from external sources and through user fees.

The central costs of the MOE can be reduced through implementation of at least part of the recommendations produced by the report of the Civil Service Agency's Job Inspection Unit. A major consideration for the MOE in the immediate future will be its ability to mobilize its decentralized staff and the school supervisory system. Large personnel expenditures are incurred in both of these areas without any evidence of a corresponding contribution of these personnel to the goals of the MOE.

Private education, especially at the primary level, should continue to be encouraged but a rational and predictable subsidy process must be implemented. Also, total subsidy levels should be stabilized until public primary education programs are operating at an acceptable level.

Finally, a true decentralization of educational responsibility should be promoted through the formation of local educational authorities. As was suggested earlier, a major function of these local authorities should be the collection and

disbursement of school fees. Only in this manner can greater local community support be engendered and maintained for the primary education system.

The proposals made here for the economy, the GOL and the MOE are all difficult and some will be painful for certain individuals. But they are all necessary and they all need to be initiated soon. A delay in redirection of the nation and its human resource activities will not only not avoid these problems, it will magnify them. Difficult choices now are the only means of avoiding a perhaps unredeemable situation later.

2.5 Manpower Supply and Demand

Up to now, the discussion has concentrated on the economic environment and the budgetary inputs of the educational and human resource systems. Attention will now turn to the outputs of the system, specifically graduates and other school leavers, and how this output of education meets labor market and other social needs. Before proceeding with that discussion, it is necessary to add some warnings about the inherent limitations of such manpower analyses and the special problems of conducting such analyses in Liberia, at this time.

Traditional manpower analysis assumes 1) relatively fixed relationships between educational qualifications and job requirements, and 2) that these relationships are subject to only slow and minor change over time. Under such assumptions, it is possible to create a set of coefficients that relate economic sector growth to changes in the occupational distribution and,

via occupation-education coefficients, can allow one to forecast new manpower demands that result from the growth in economic activity.

The 1983 sector assessment engaged in exactly this type of analysis, and Table 2.15 reproduces the results that were derived at that time. The major finding was that a surplus of graduates existed in secondary academic and higher education and that shortages existed in primary (assumed to be equivalent to mastery of literacy and numeracy skills) and secondary/postsecondary vocational skills. Since the analysis was conducted for the formal monetary sector alone, the needs for basic skills for traditional sector workers were not explicitly documented.

As was noted in the 1983 assessment, this traditional approach to manpower analysis ignores the adaptive ability of the labor market to bring about its own manpower supply and demand adjustments. For example, employers who cannot obtain a sufficient number of technically trained graduates often will hire secondary academic graduates and train them "on the job." Similarly, university and college graduates who are unable to find employment in jobs that traditionally have required their level of education will begin to move into lower level occupations, often displacing employees or candidates who have less formal education. As a result of these processes, unemployment may have a transitional incidence at any place in the education hierarchy but, in the long run, unemployment will eventually hit hardest at the least educated. A secondary effect

Table 2.15

Annual Supply and Demand of Graduates by Educational Qualifications
1983

Level and Type of Education	Projected Demand		Projected Supply	Net Need or Surplus	
	Original Estimate	Revised Estimate		Original Estimate	Revised Estimate
No Educational Qualifications	-0-	-0-	50,550	50,550 (surplus)	50,550 (surplus)ts
Primary Education	10,000	8,880	8,500	1,500 (need)	380 (need)
Secondary Academic Education	550	1,500	4,450	3,900 (surplus)	2,950 (surplus)
Secondary Vocational and Post-Second. Vocational/ Technical Education	1,100	1,160	650	450 (need)	510 (need)
Post-Secondary Education (excl. Teacher Training)	350	460	650	300 (surplus)	190 (surplus)

Source: Liberian Education and Training Sector Assessment, Ministry of Planning and Economic Affairs, December, 1983.

of this process is increased demand for education and the process that is described as "credentials inflation"; i.e., a tendency for employers to hire more highly educated candidates (or at least those with greater quantities of schooling) but without a change in the occupational wage.

These methodological considerations in the use of traditional manpower analysis are further reinforced when one considers the issues of data coverage, quality, and timeliness. To create the coefficients between economic sector growth and occupational demand, and between occupational change and educational demand, requires a fairly detailed and accurate survey of the labor market. This data can be generated by manpower censuses or samples, or by tracer studies of recent graduates or school leavers. The latter have the advantage of specific linkage to a type and form of education or training and concentrate on current labor market behavior. In contrast, a manpower survey may categorize workers by education level, but the workers in that educational category may vary from recent graduates to employees approaching retirement.

The purpose of this preliminary discussion is to assert that even in the best circumstances manpower data is subject to a variety of interpretations given assumptions about the data and about the future direction of the economy. In Liberia, serious data inadequacies exist in terms of information at all levels: sectoral growth, occupational distribution, required educational qualifications, and educational output. This is a common problem

in developing nations; however, Liberia has a second problem which is less common and that is that aggregate manpower demand may, in fact, be declining due to the economic stagnation of the last decade.

For example, an MPEA sample study in 1984-85 found that the following changes had occurred in aggregate employment in Liberia's major industries between 1981 and 1985:

Mining	- 51%
Agriculture	- 22%
Forestry	- 48%
Construction	- 96%
Manufacturing	- 36%
Trade	- 36%
Transport	+ 1%
Services	+ 53%

Since 1985, it is probable that the decline in mining has continued (and will reach a low point with the LAMCO closings) while forestry and construction have probably regained some of the jobs lost. The significant declines depicted above are especially critical since both traditional and contemporary manpower analysis techniques assume a secular pattern of economic growth. In a situation such as Liberia's, any new job created will be competed for not just by recent graduates or those moving from one job to another, but by those workers who were previously employed. There are always some transitionally unemployed workers in any economy; the difference in Liberia is that in 1988 these individuals represent a significant addition to the supply of manpower.

The labor market situation in Liberia is analogous to that discussed earlier for fiscal affairs. Just as the current budgetary conditions indicate little relevance to the concept of marginal fiscal capacity, so in the manpower context is there little aggregate absorptive capacity for new graduates. However, there will be a critical restructuring of employment in Liberia in the next decade because, regardless of demand, new graduates will be produced from all levels of the education and training system. Competition for jobs will be quite severe, and it is not impossible that an oversupply of graduates will exist at all levels. This will cause the quality of one's education to become more important, at least among private sector employers, as individuals will be screened for employment based on acquired personal ability and not just on the basis of formal qualifications.

In the section that follows, data drawn from the 1985 MPEA labor survey and a more recent (January 1986) training survey by the Agricultural and Industrial Training Bureau will be presented. The analysis which concludes this section will be linked to this data but will depend in equal parts on inferential analysis based on observed patterns of employee utilization and the earlier stated views concerning the future direction of the Liberian economy.

2.5.1 Manpower Utilization and Demand

Table 2.16 presents the distribution of establishments and employment found in a November 1985 sample survey of the

Table 2.16

Employment in Selected Manufacturing and Service Industries
(establishments with five or more employees)
November, 1985

		Employment	Establishments
I.	Manufacturing		
	Tailoring	1,278	154
	Wood Furniture/Mattresses	508	50
	Chemicals/Paint/Soap/Drugs/ Industrial Gases	583	11
	Metal Manufacturing/Batteries	336	19
	Paper Cartons	13	1
	Blocks/Tiles/Glass	197	13
	Bakers/Beverages/Food/Flour	617	17
	Plastics/Rubber	35	3
	Jewelry/Ivory	53	8
	Cigarettes	61	1
	Matches	48	1
	Printing/Publishing	225	14
	Recordings	9	1
	Sandals	5	1
II.	Service Industries		
	Schools	2,973	183
	Religion	714	65
	Repair Shops (except auto)	260	29
	Auto Repair	668	99
	Security	409	8
	Medical	139	27
	Insurance	513	15
	Banking/Finance	573	13
	Accounting	89	9
	Miscellaneous Business Services	290	13
	Recreation/Cinemas	184	10
	Associations	273	12
	Lottery	41	1
	Dry Cleaning/Laundry	132	8
	Legal	59	7
	Beauty Salons/Barbers	31	6
	Travel Agencies	25	3
	Miscellaneous	69	4

Source: Manpower Demand and Supply in Liberia, Ministry of Planning and Economic Affairs, November, 1985.

manufacturing and service industries. Within the manufacturing industry, the largest concentration of employment was found in clothing and tailoring, wood furniture and mattress production, and chemicals/paints/etc. production. The first two categories were characterized by small firms averaging less than ten employees each. The last group (chemicals/paints/etc.) consisted of establishments averaging over fifty employees each, although the distribution of enterprises indicates dominance by a small number of quite large firms. Almost all manufacturing firms in 1985 reported stable or decreased employment since 1981.

In the service sector employment is dominated by schools, as one would expect. In fact, schools and churches account for almost half of the service industry employment. Both of these areas reported growth since 1981, as did a majority of the other service categories.

Table 2.17 presents the December 1985 report of the Census of Establishments conducted by the MPEA. The Census report included data on the number of establishments surveyed, total employment and non-Liberian employment. While public sector employment dominates (it represents 49.7% of sampled employment), the leading industries involved in private sector activities are, in order, services, trade, and mining. These three industries, respectively, represented 33.7 percent, 20.8 percent and 19.2 percent of employment in the private sector.

Non-Liberian employment is important because it represents a special opportunity for labor absorption through localization of

Table 2.17

Results of 1985 Census of Establishments
(as of December 13)

	Number of Establishments	Employment	Non-Liberians	Percent Non-Liberi
Agriculture/ Fishing/Forestry	26	1,347	75	5.6%
Mining	6	5,063	397	7.8%
Services	527	8,875	1,179	13.3%
Trade	404	5,475	934	17.1%
Clothing and Tailors	154	1,278	597	46.7%
Manufacturing	140	2,685	224	8.3%
Construction	17	776	100	12.9%
Transport	30	842	50	5.9%
Total Private:	1,304	26,341	3,556	13.5%
Public Sector:	349	26,069	448	1.7%
TOTAL:	1,653	52,410	4,004	7.6%

Source: Manpower Demand and Supply in Liberia, Ministry of Planning and Economic Affairs, (Revision, 1986).

jobs currently held by non-Liberians. Since the positions held by non-Liberians tend to be professional, managerial, and higher-skilled technical or vocational occupations, the localization issue is especially important for prospective graduates from the higher levels of the education and training system. Non-Liberians as a percentage of total employment in a private sector industry ranges from a low of 5.9 percent in transport to 46.7 percent in clothing and tailoring; other industries with significant non-Liberian employment are trade (17.1%), services (13.3%), and construction (12.9%). The public sector employment figures indicate only a 1.7 percent participation rate for non-Liberians.

Moving from the industrial composition of employment to the issue of occupational distribution, the 1985 study found the following pattern of private sector employment:

Professional and technical workers	6.2%
Administrators and managers	3.0%
Clerical and related staff	9.1%
Sales workers	3.1%
Service workers	10.3%
Agricultural workers	34.6%
Production and related staff	33.8%

The most significant implication of this pattern is the high concentration of employment in relatively low-skilled jobs. Agricultural workers and production and related staff (the latter because of the labor-intensive production techniques utilized in most Liberian manufacturing) tend not to be in positions that require extensive education or training. The relatively small number of jobs that do require such skills often are filled with

non-Liberians or utilize on-the-job training as a major complement to formal academic preparation.

The 1986 training needs study by the Agriculture and Industrial Training Bureau provides further insight into the demand by employers for formal educational skills. The survey collected data from Monrovia enterprises in four industrial sectors: manufacturing, repairs, construction, and utilities/ transportation/communications. For each individual sector the survey included all enterprises accounting for the top one-third of total employment plus a 20 percent sample of all other enterprises.

One part of the survey was a comparison of the educational attainment of existing workers compared to the educational requirements established by employers for new employees. Table 2.18 presents the results of this part of the survey with the educational qualifications dimension divided intc the following categories: no education, 1-6 years of education, 7-12 years of education, 12 or more years of education, and "not applicable," (a term implying that some positions are not linked to formal educational qualifications).

The distribution of educational requirements indicates strong preference for workers with at least some postsecondary education. From a low of 65 percent in manufacturing to the surprising 97 percent in the utilities/transportation/ communication sector, employers stated that these jobs in their establishments "required" a postsecondary education. However, a

more realistic appraisal is indicated by the distribution of workers by actual educational attainment. There was still a majority of postsecondary qualifications but the percentages dropped to a low of 50.7 percent in manufacturing and showed a high of 63.6 percent in utilities/transportation/communications.

The nominal values in Table 2.18 are subject to debate depending upon one's confidence in the survey methodology. However, the pattern of divergence between present qualifications of workers and employers' credential requirements for new workers is a common phenomenon in such studies and can be traced to three main causes. First, current technology may have increased the formal education and training needed to enter employment in the firm. Second, a decline in educational quality may mean employers now have to ask, for example, for a college graduate in order to get the same mix of abilities and skills they once obtained from a high school graduate. And third, an increase in the supply of more highly educated graduates may allow the employers to require a higher qualification of new employees because the employers feel the oversupply will allow them to hire better new workers without a proportional increase in the wages or salaries they must pay.

Depending upon the industry, or even upon the individual employer, any combination of these determinants could lead to the patterns seen in Table 2.18. However, observation of the current labor market would suggest that quality decline and graduate

Table 2.18

Percentage Distributions of
Educational Requirements and Qualifications
in Four Selected Industries
1985

I. Educational Requirements

Industry	Years of Education				
	None	1 - 6	7 - 12	12+	Not Applicable
Manufacturing	1.0%	2.6%	4.8%	65.0%	3.2%
Repairs	10.4	6.4	10.4	72.8	-
Construction	2.1	7.5	-	67.0	23.4
Utilities/Transportation/ Communications	-	3.0	-	97.0	-

II. Educational Qualifications

Industry	Years of Education				
	None	1 - 6	7 - 12	12+	Not Applicable
Manufacturing	6.7	2.8	13.0	50.7	1.6
Repairs	8.0	18.0	13.0	61.0	-
Construction	22.3	13.8	-	62.8	1.1
Utilities/Transportation/ Communications	1.5	11.2	23.7	63.6	-

Source: Selected Industries Training Needs Survey Report, Agricultural and Industrial Training Bureau, 1986.

Note: The number of sampled employees covered by the four industries were, in the same order as listed above, 315, 173, 94 and 1,063.

oversupply are probably the more important factors in Liberia at present.

One pattern that is suggested by this data (and also was discussed in the 1983 Education and Training Sector Assessment), is that Liberia may be evolving a bi-polar pattern of manpower demand. In such a situation, one finds that the economy increasingly becomes divided among those low-level jobs (in both the traditional and modern sectors) that require little if any education beyond basic literacy, and the modern sector positions that require at least some postsecondary qualifications. In most societies, such bi-polarity is found primarily in the public service where increased credential requirements for teachers and civil servants result in little residual demand for individuals with intermediate levels of educational qualifications. In Liberia, however, this pattern appears to be evolving in the private sector as well.

The long-term implications for education of such a situation can be dramatic. When students begin to realize that the principal value of primary and secondary education is to gain access to postsecondary education, there will be a tendency for an increase in attrition as disadvantaged or other poorly-achieving students decide to leave school as soon as is legally possible. Such a bi-polar pattern of educational attainment will have substantial ramifications for social and political conditions as well as for the economy.

2.5.2 Manpower Supply

Given the developments in manpower demand, what is the current situation in terms of educational output and manpower supply? As noted earlier in the supply-and-demand table from the 1983 Sector Assessment, the projected annual supply of workers into the labor market consisted of 8,500 workers who were primary education graduates, 4,450 with academic secondary qualifications, 650 with vocational/technical training, and 650 from all forms of postsecondary training exclusive of teacher preparation programs. Table 2.19 presents an update of manpower supply estimates with data on the expected output by level of education and occupation for the period 1984 to 1989 and the annual average for the five-year period.

These data indicate an expectation of 582 college degree entrants to the labor market each year, 633 entrants with some postsecondary education (including teachers and vocational/technical specialists), 862 entrants with secondary or post-secondary preparation, and another 1,001 labor market entrants with unspecified educational qualifications. Unfortunately, there simply is not the new job creation in the Liberian economy to absorb these workers. As the 1986 MPEA report notes:

> "....the employment picture indicates the need for employment generating activities to ensure the productive use of the existing manpower supply."

Now, in 1988, the situation is even more severe. Even though enrollments and graduates from the formal education and training system are either stable or declining, in the current economic

situation there still is an excessive supply of graduates relative to the total replacement and new demand for workers. While current data simply does not allow a detailed quantification of the current oversupply, it is possible to forecast strong job competition in both the public and private sectors and an inflation of credential requirements throughout the modern sector economy as a means of rationing scarce jobs among plentiful candidates.

2.5.3 Manpower Implications of Current Supply-and-Demand Conditions

Given the labor market conditions discussed here, there is only a limited range of options available for the MOE specifically, and the GOL generally, to pursue in regard to improving the linkage between education and training activities and the absorptive capacity of the economy. An immediate priority will be to attempt to contain enrollment in post-secondary education in order to reduce the emerging oversupply of labor market entrants at that level and to discontinue the implicit subsidization of the process of credentials inflation now taking place in Liberia. Containment of postsecondary opportunities is an exceedingly difficult political goal and could not be justified solely on the basis of manpower considerations. However, when one considers the harsh fiscal circumstances under which the GOL will have to operate for the foreseeable future and the high unit cost of postsecondary

Table 2.19

Supply of Skilled Manpower
1984 to 1989

	1984	Cumulative 1984-89
College Degree Level Occupations	582	2,910
Chemists	11	55
Physical Scientists	24	120
Civil Engineers	8	40
Elec. & Electronic Engineers	8	40
Geologists	5	25
Mining Engineers	2	10
Geographers	9	45
Biologists & related	6	30
Agronomists & related	60	300
Medical Doctors	14	70
Professional Nurses	59	295
Mathematicians & related	17	85
Economists	75	375
Accountants	72	360
Lawyers	26	130
Teachers	48	240
Social Scientists	45	225
Linguists	12	60
Business Administration	17	85
Public Administration	64	320
Post-Secondary - Less than College Degree	633	3,165
Draftsmen	48	240
Civil Engineering Technicians	7	35
Elec. & Electronic Engineers	164	820
Life Science Technicians	45	225
Para-Medical Technicians	15	75
Practical Nurses	31	155
Professional Midwives	39	195
Rural Teachers	265	1,325
Forestry	19	95
Secondary and Post-Secondary	862	4,310
Accounting	220	1,100
Business Education	43	215
Secretaries & related	479	2,395
Bookkeepers	120	600

Table 2.19 (continued)

Various Educational Levels	1,001	5,005
Machining Trades	51	255
Auto Mechanics	195	975
Heavy Duty Mechanics	21	105
Plumbers	101	505
Welders	8	40
Masons	24	120
Carpenters	148	740
Marine Mechanics	3	15
Air Conditioning & Refrigeration	20	100
Agriculture	421	2,105
General Mechanics	9	45
Total All Skills:	3,078	15,390

Source: Manpower Demand and Supply in Liberia, Ministry of Planning and Economic Affairs, November, 1985.

programs, this fiscal consideration, combined with that of the manpower situation, requires firm and immediate action.

Within the postsecondary programs, every effort must be made to increase the internal efficiency of instructional programs. More demanding but psychometrically appropriate entry requirements should be established, reduced attrition and repetition attained, and a better match between student interest and abilities, choice of specialization, and employment opportunities after graduation must be sought. In addition, the further consideration of forms of user-financing of post-secondary education should be explored but not at the expense of reinforcing the inherent elitist tendencies of this educational subsector.

Vocational/technical education, at both the secondary and postsecondary levels, must be examined to determine which programs are generating benefits sufficient to justify their cost burdens. Wherever possible, the GOL should attempt to shift training burdens, in whole or in part, from institutional providers to private sector establishments. The greater use of employer-based, on-the-job training experiences will reduce training costs to the GOL and increase the relevance of the training experience to both the trainee and the employer. Greater employer financing of vocational/technical programs should be sought where it is decided that the programs should continue as a government management responsibility.

Secondary education enrollments should be stabilized, but allowance should be made for increased proportional access of rural and economically disadvantaged students. Academic standards should be increased, even if this results in increased repetition. Attrition problems, which might result from higher standards, should be reduced by increasing entry requirements into the secondary cycle and mobilizing more effective supervisory and student guidance performance from personnel already charged with these responsibilities.

A goal of secondary education should be to produce graduates that have skills and experiences that make them immediately employable, thus reducing the tendency for postsecondary education to become a minimum qualification for modern sector employment. This reestablishment of credibility for the secondary education degree will greatly reduce the present drift toward a bi-polar demand pattern for educational qualifications.

Finally, primary education should be expanded only to the extent allowable by exploitation of existing excess capacity and by any future increases in the level of funding. Quality improvements will require a shift in emphasis from increasing teacher numbers and training qualifications toward improved supply of instructional support materials and the utilization of the presently unrealized capacity of the supervisory system to improve classroom practices.

The curriculum focus in primary education must be on basic skills. The improved ability of primary school graduates to

read, write, and work with numbers will facilitate health, agricultural, and adult education dissemination activities for those who remain in the traditional sector. In addition, this same improved ability will be the best means of promoting more equitable access (and more equal probabilities of success) among the children who go on for additional formal education.

The solution to Liberia's manpower problems cannot be left solely to the MOE and the education and training institutions. The GOL must accept responsibility for promoting job creation in the private sector (the continuance of public sector reductions in staffing may well be required in order to resolve the fiscal crisis that exists. The promotion of job creation by the GOL can be carried out at two main levels. The first is the institution of fiscal management practices, licensing regulations, and tax policies that will encourage new establishments to be created and existing establishments to expand their operations. Second, the GOL needs to engage in specific policies designed to encourage private sector business to utilize labor-intensive alternatives of production where these are feasible, and to support localization of management and professional staff. In addition, the successful promotion of the existing privatization initiative should result in revitalization of these industries and improved employment oppportunities.

The difficulties such a program entails and the harshness of some of the choices that must be made are a reflection of how critical the current situation is. If the current opportunities

for reform and improvement are ignored, then both the fiscal and manpower problems of Liberia can only deteriorate further.

This discussion concludes the macroeconomic section of the economic and financial analysis. In the section that follows, the analysis will be directed at specific cost and benefit issues related to individual education and training programs.

2.6 Educational Costs and Financing

2.6.1 Introduction

Within the methodological limitations of an EHR assessment, it is not possible to accomplish the detailed analysis of internal efficiency required for policy decisions on specific programs or projects. The purpose of cost analysis within an assessment is to combine the available quantitative data, however minimal, with qualitative information so that areas of potential internal efficiency may be identified. A special limitation on this approach in Liberia is the lack of current and reliable system level data (numbers of schools, teachers, classes, enrollments by type and level), as well as program level information on the components (staff, equipment, materials, and facilities, student attrition, and repetition) of expenditures per student or expenditures per graduate. The lack of data, in itself, is an indicator of the fiscal constraints described in the previous sections of this chapter, as well as the weak system of performance incentives detailed in Chapter 3.0.

To deal with the lack of recent information, system and program level data from 1984 will be used in conjunction with cost information from 1986/7 in order to generate estimates of average unit and cycle costs at the primary and secondary levels. The evidence of declining enrollments since 1984 in public schools and the shifting responsibility for education (Table 2.20) indicate that the cost figures presented here will underestimate government per-student investment in schooling.

The analysis which follows is divided into two main parts. The first, largely descriptive, identifies the major sources of funding for each of the levels and types of education and training. It also provides a summary of the data on enrollments, staffing, and other relevant institutional or program characteristics. Additional detailed data on each level and type of schooling are presented in the subsector chapters.

The second part of the analysis presents estimates of unit costs and cycle costs for the different levels and types of schooling. The lack of current reliable data prohibits the combination of cost information with information on the prospective earnings of graduates to produce indicators of the returns to schooling.

2.6.2 Educational Financing

Educational financing in Liberia represents a joint effort of the central government, religious missions, private organizations and institutions, and families. Table 2.20 summarizes the sector shares in education. The data in the table

Table 2.20

Public, Mission, and Other Sector Shares
in Elementary and Secondary Enrollments
1981 and 1984

Public

	1981		1984		1981/4
	Students	%	Students	%	Change
Pre-grades	60459	.66	49588	.51	-.18
Elementary	104229	.67	91597	.63	-.12
Junior High	21683	.63	20348	.50	-.06
Senior High	13157	.59	11161	.44	-.15
Total	199528	.66	172664	.56	-.13

Mission

	1981		1984		1981/4
	Students	%	Students	%	Change
Pre-grades	12915	.14	35143	.36	1.72
Elementary	26700	.17	26902	.18	.01
Junior High	8803	.26	9366	.23	.06
Senior High	6457	.29	8980	.35	.39
Total	54875	.18	80391	.26	.46

Other

	1981		1984		1981/4
	Students	%	Students	%	Change
Pre-grades	18020	.20	12082	.12	-.33
Elementary	24237	.16	27977	.19	.15
Junior High	3879	.11	10593	.26	1.73
Senior High	2629	.12	5218	.21	.98
Total	48765	.16	55870	.18	.15

Sources: Liberia Education and Training Sector Assessment, 1983, Table 2-12; Ministry of Education, National Education Survey, 1984.

Note: The percentage change in sector share for each level and type of school was calculated by subtracting 1984 enrollments from 1981 enrollments and dividing the result by 1981 enrollments

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indicate that between 1981 and 1984, enrollments in the public schools declined by 13 percent while enrollments in non-public schools increased by 46 percent in the mission schools and 15 percent in the other private schools. The largest change is at the secondary level, particularly senior secondary. Enrollments declined by 15 percent in public schools and increased by 39 percent in mission schools and 98 percent in other private schools.

Shares in the cost of schooling are determined by the level and type of schooling. The elementary and secondary public school system is characterized by partial decentralization, with the exception of Monrovia Consolidated School System (MCSS), which has almost full managerial and fiscal control over the governance of the schools within its jurisdiction. The MCSS submits its own budget to government, has the power to hire and fire teachers, and retains and allocates school fees. In contrast, all other public schools are dependent on the MOE for instructional materials, supplies, and maintenance, and personnel assignments and dismissals are made by central MOE staff with the Minister as final arbiter. After a short but unsuccessful experiment in decentralizing fiscal control of fees, the practice was discontinued due to non-reporting of either income or expenditures.

Return of the funds to Monrovia has proved equally problematic. Many believe that the lack of funds for materials and supplies at the school and county and regional education

office levels has acted as a powerful incentive against reporting true enrollments, receipts, or expenditures by item.

Given these difficulties, either the MCSS model, where the number of schools justify the creation of a school system, or the Ministry of Health's arrangements for community retention and re-investment of the money generated by the CCCD's drug sales provide viable alternatives to the present situation. Community boards, consisting of parents, teachers, and influential community members could be empowered to determine exemption from fees, to collect fees, and to authorize expenditures. This would place accountability nearby in the community rather than in the more remote county or central levels. It would also serve as an incentive for parental involvement in schooling.

Within the current decentralization schema, county education officers have the authority, with the approval of the Ministry, to raise funds for the conduct of their work (vehicles, gasoline) or for the schools. Funds are generally raised by charging additional school fees. Since, these funds are reported neither on the income or expenditure side of the MOE budget, the regularity of the imposition of extra fees and their amount and use is not known. The low per capita income in rural areas suggests that this practice should be carefully monitored since it raises the opportunity cost of sending children to school.

Teachers and students also raise funds either by planting a cash crop or hiring themselves out as day laborers. It is difficult to weigh the costs and benefits of these activities as

there is no way to estimate the loss of instructional time over the school year or the use (and, therefore, potential benefit) of the money generated.

Parental contributions to schooling vary by the level and control of the school. Basic expenses at different levels and in different types of school include registration charges (public) or tuition fees (non-public), textbooks or textbook rental, uniforms (pre-collegiate levels), and National Examination fees.

In recognition of the expanded access generated by mission and other private schools, government has provided subsidies to selected institutions since 1940. Concern about the lack of rationale governing the distribution of subsidies led to an evaluation of the subsidy program in 1978. A major outcome of An Evaluative Study of the Subsidy Program for Non-Public Schools Provided by the Government of Liberia (Modu, 1978) was the development of a set of criteria for the award of the grants. The criteria were subsequently amended as a result of the MOE's declining resources. The current criteria for eligibility state that a school must be:

- at least two years old.
- registered with and approved by the Ministry.
- not operated by a concession.
- must have at least the following enrollment:

  elementary at least 150 students in urban areas or 100 students in rural areas.
  secondary at least 50 at the junior high or 30 at the senior high level.

Eligible institutions are required to submit applications which report enrollments, staff salaries, and fee income.

Student enrollments, staff salaries, and the difference between expected income from student fees and staff salaries are the stated bases for the determination of the amount of each award.

While alternative weightings were designed to determine the actual amount of each institution's subsidy in 1984, the 1984 subsidy list does not correspond with either weighting scheme. Consequently, it is not clear how the actual amounts were (or are) determined.

The most glaring discrepancy is between the treatment of eligible non-public schools and Cuttington University College. The 1986/7 subsidies budgeted for elementary and secondary schools ranged from $1,700 to $60,000. At the same time Cuttington University College (CUC) was allocated a subsidy of $1,049,750 or 35 percent of all subsidies for formal education. Furthermore, as subsidies have declined, CUC's share increased in 1985/6 and was relatively stable as a percent of the total in 1986/7.

	1984/5	1985/6	1986/7
Schools	$1,928,724 (65%)	$710,620 (42%)	$542,048 (46%)
CUC	$1,049,750 (35%)	$968,520 (58%)	$645,579 (54%)

At this time the issue is moot since payments of subsidies are several years in arrears and institutions are apparently receiving only a fraction of the amount budgeted for them by the MOE. Nonetheless, given the increasing importance and responsibility of the non-public primary and secondary schools in

providing access to education, intra- and interministerial agreements need to be reached on the eligibility criteria, the criteria for the amount awarded to each institution each year, and the division of the awards among elementary, secondary, and higher education institutions.

Donor assistance has played a large role in the development of educational opportunities in Liberia. Mission and private schools are open to all students, regardless of faith and historically have received a proportion of their resources from abroad. Although the current level of dependency of mission schools on outside funds is not known, the sharp reduction in subsidies (and late or nonpayment) has caused considerable concern about the ability of the mission schools to continue. To address this problem and the general decline in the availability of government funds for services, USAID has designed a $13.4 million dollar project which will provide temporary relief to mission and non-profit schools, health organizations, and community development programs, especially those involved in enterprise promotion. With regard to non-public schools, the project is intended to create an information network, improve the quality of services, and increase fund-raising capabilities.

The government system has also received substantial government assistance. World Bank loans for education by subsector and subsector focus are outlined in Table 4.8 in Chapter 4.0. Table 2.21 summarizes donor assistance, as well as GOL investments, in development projects by type of education

from 1979 to 1986. The decline in foreign assistance evident in 1986/7 reflects the phasing out of the fourth World Bank project and can be expected to continue until currently due payments are made on outstanding international debt arrears.

2.6.2.1 Elementary and Secondary Schooling

Elementary schooling in Liberia consists of one or more years of non-compulsory pre-grade schooling and Grades one through six. Passage to junior secondary school (grades seven through nine) is dependent on successful completion of elementary school as determined by classroom tests and passage of the particular junior secondary school's entrance examination.

Graduation from either junior secondary school or senior secondary school is dependent on the results of classroom tests and the National Examinations. Pass/fail on the National Examination is set by the mean score. A pass is equivalent to a score at or above the mean on all four tests. In 1984, 99 percent of the ninth graders and 89 percent of the twelfth graders sat for the examinations. The pass rates were as follows:

	Math	Science	Social Studies	Language Arts
Junior Secondary	41.7%	45.9%	47.0%	49.2%
Senior Secondary	60.4%	58.8%	64.4%	59.1%

Unfortunately, the data on pass rates are not broken down by management of school. Presumably such analysis might explain the increasing preference for non-public schooling, despite the

Table 2.21

Development Budget for Education
1979/80 - 1985/86
($000)

Level/ Year	Elementary & Secondary		Vocational/ Technical		Higher Education	
	GOL	Foreign	GOL	Foreign	GOL	Foreign
1979/80	4.8	6.0	1.0	1.9	1.5	0.0
1980/81	0.7	5.2	1.5	5.9	0.3	0.4
1981/82	1.1	2.4	1.0	2.6	2.0	0.0
1982/83	0.8	5.0	0.7	0.6	3.0	0.0
1983/84	0.9	7.0	0.7	0.9	2.5	0.0
1984/85	0.8	5.9	0.6	0.7	1.0	0.0
1985/86	0.8	1.1	0.4	0.0	0.0	0.0

Source: Bureau of the Budget.

higher costs associated with the latter. Anecdotal evidence suggests that these schools offer more frequent teacher attendance, more time devoted to instruction, and better facilities than do public schools.

Between 1981 and 1984, enrollments increased in the pre-primary grades by 6 percent but declined at the elementary level by the same percentage, suggesting that the pre-grades may be serving a day care rather than a "headstart" function. Enrollments increased by 17 and 14 percent, respectively at junior and senior high levels, reflecting the expanded access provided by the mission and the other private schools.

In 1984, there were some 666 teachers for 49,448 public pre-grade children, indicating a student teacher ratio of 1:74. The actual range in class size or the extent to which non-teaching staff participate in the pre-grade activities is not determinable from the available data.

At the elementary level, 4,470 teachers served 146,476 elementary students in grades one through six (excluding Monrovia) for an average class size of 33. A 1986 study team visiting both the Improved Efficiency of Learning (IEL) and conventional schools found, however, that in most schools they visited the average class size was twenty, except in the upper grades where the typical class had five to ten students. It is not clear whether this observation captures the decline in enrollments since 1984 or reflects the difference between enrollments and average daily attendance. It does suggest,

however, the existence of a large number of small schools which, in turn, indicates the possibility of improving economies of scale through consolidation or increased participation rates. A school mapping exercise combined with an accurate census of enrollments would be valuable in establishing the extent to which consolidation might be justified, as well as in determining the location of any new schools.

As would be expected, the statistics on class size in Monrovia are quite different. The 1986 data from a recent evaluation of the MCSS system exhibit a range of 23.3 students to 95.3 students in elementary grades indicating a continued high demand for schooling. More information, however, is needed on the factors contributing to the variation in class size (e.g., location, building size, attrition, etc.) if improvements in efficiency are to be realized. The large class sizes on the upper end of the range represent a real constraint on the teaching/learning process.

At the secondary level in 1984, there were 1,849 teachers serving 40,307 junior high students and 1,082 teachers teaching 25,359 senior high students for average class sizes of 22 and 23, respectively. The more recent MCSS data show a range of 25 to 62 students per class in junior high, reflecting the growth of enrollments in the subsector. The range for senior secondary school classes in the MCSS sample is 13 to 39.

The 1986/7 budgets for the MOE and the MCSS elementary and secondary school are shown in Table 2.22. The budget for the MOE

represents estimates of funds appropriated rather than expended. The budget estimates indicate that instructional expenditures for the MOE system in 1986/7 averaged 92 percent of the budget and when combined with administration costs totaled 99 percent of the budget. The largest expenditure in the remaining one percent was for food for the students at Voinjama and Zwedru multilaterals. No funds were made available for educational materials, supplies, communications, or maintenance. School fees were used to provide both the MOE and, to some extent, the regional and county offices, and the schools with supplies.

The high percentage for salaries not only reflects the fiscal crisis of government but graphically illustrates the context for schooling. School buildings are in such a state of disrepair as to appear, in some cases, dangerous to occupants. With the exception of the IEL elementary schools, educational materials and supplies are scarce to non-existent, and furniture is consistently inadequate.

The situation in the MCSS appears to be somewhat better, at least in the most recent budget year. Administrative and instructional salaries constitute only 94 percent of the budget, leaving approximately six percent to finance the other necessary inputs to schooling. Moreover, receipts from school fees, some $403,319, are not shown in the external budget but were available for disbursement. Added to the comparative advantages of greater administrative efficiency (four dollars per pupil are spent on administration as opposed to the MOE's eight or more dollars--

Table 2.22

Estimated Actual Expenditures for the MOE and the MCSS
Public Elementary and Secondary Schools
1986 - 1987

	MOE	MCSS
Administration	$1,246,532	$110,584
Instruction	15,764,661	2,788,100
Teacher Fringe Benefits	0	0
Workshops/other	9,000	69,526
Transportation	15,875	1,800
Gas & Oil	75,749	15,900
Educational Materials & Supplies	0	41,460
Equipment	0	24,000
Other Supplies	0	0
Communications	0	0
Utilities		0
Food	91,261	0
Other	0	0
Maintenance	0	41,626
Total	$17,203,078	$3,092,996

Sources: Bureau of the Budget, The Budget of the Government of Liberia For Fiscal Year 1986-87; MOE, Comptrollers' Office, 1988.

Note: Figures for MOE administration of public schools were estimated from the budget categories for Regional Supervision, Direction & Management of Instruction, Curriculum Development, Inservice training, and the multi-lateral high schools. Within budget categories only costs related to personnel, food, and gasoline were summed. Salary information for personnel in the regional offices and teachers was taken directly from payroll records.

both are underestimated if enrollments have declined) and access to locally generated fees, the MCSS also has the advantage of working with students from relatively advantaged families. A study of the distribution of World Bank textbooks, for instance, revealed that of the 40 percent actually sold, 80 percent were purchased in and around Monrovia. The MCSS students, therefore, are much more likely to have books than are their peers in the MOE public schools and as the budget indicates, teachers are more likely to have supplementary classroom materials.

The data shown for the MOE and the MCSS in Table 2.22 combined with the salary information from the current payroll makes it possible to estimate GOL expenditures per pupil at each level. Based on the assumption that elementary students are taught by teachers with a "C" certificate or less, junior secondary school students by "B" certificate, and senior high students by teachers with higher credentials than a "B" certificate, the results are as follows:

Elementary	$114
Junior Secondary	$245
Senior Secondary	$442

Total unit costs, of course, require the addition of family contributions to schooling. These contributions are estimated at $38 per year for elementary and $157 per year for secondary students. While these fees are not high relative to the private sector where family expenditures range from $300 to $800 per year, the fees do impose considerable burdens on parents in a country where the average annual income per person is estimated

at $460. For a typical rural parent with a small family (two elementary school aged children and one junior secondary student), the school bill could amount to over 50 percent of annual cash earnings.

In an attempt to address this problem, the MOE has lowered the 1988 registration fees in rural areas. The new charges will be $3 per elementary student and $20 per secondary student. Additional, and more substantial, savings to parents could be realized by eliminating county fees, renting or loaning books to students, and permitting parent committees to determine the necessity of school uniforms.

2.6.2.2 Teacher Training

Teacher Training is provided by four year Bachelor of Science programs at the University of Liberia (UL) and Cuttington University College (CUC), two-year Professional Certificate courses at the Kakata Rural Teacher Training Institute (KRTTI) and the Zorzor Rural Teacher Training Institute (ZRTTI), and donor funded inservice teacher training programs.

Both UL and CUC offer majors in both elementary and secondary education. The bulk of enrollments, however, have traditionally been in secondary education. For instance, in 1987, only 23 of those enrolled in UL's teachers college majored in primary education.

Admission to the two colleges requires successful completion of secondary school and a pass on the National Examination. Both

institutions also administer their own entrance examinations. Students are admitted unconditionally to UL if they pass both the English and mathematics sections of the test. If they pass only one part but score above the 13 percentile on the second part, they are admitted conditionally. Conditional admission requires that the student pass with a grade of "C" a non-credit remedial course. Students must pass all three (English, mathematics, science) parts of the CUC examination to be admitted.

A secondary school diploma is required for admission to the RTTI's. RTTI and UL personnel indicate that students have been admitted to RTTI's and the UL without the stated prerequisites.

The World Bank and USAID supported inservice programs were designed to upgrade unqualified primary teachers. Participation in CINSTEP, which is now phasing out, required a secondary school diploma. The training of the inservice teachers was provided by University of Liberia and Cuttington College faculty. Success in the sixteen week residential program conferred a "C" certificate.

The USAID IEL program had no academic requirements. The only requirement was that the participating teacher work in an IEL school. The four week training in the use of programmed materials resulted in no change in professional status. USAID has revised the IEL training program, combining the instruction in the use of programmed materials with review of content and teaching methodology and will continue to provide inservice training under the new Primary Education Project. Teachers with only a "C" certificate or higher will receive four weeks of

instruction in sequenced learning, teachers without certification who had participated in IEL training will receive six weeks of upgrading training, and teachers without certification and no previous training in programmed instruction will attend a comprehensive 10-week course. In addition to the 2,826 public primary teachers, 300 hundred mission and private school teachers and principals will be invited to participate in the program, free of charge.

Enrollments in the BSc and "B" certificate programs have shown an overall decline since 1984. The timing of the decline is closely correlated with the FY 1983/4 and FY 1984/5 cuts in civil service salaries and the loss of World Bank financial support for the RTTI's. The numbers of 1984 graduates and current enrollments and graduates and the faculty student ratios of these institutions are shown below.

	1984	1987		
	Graduates	Enrollment	Graduates	F/S
UL	40	232	17	1:14
CUC	7	51	13	1:3
KRTTI	98	22	47	1:3
ZRTTI	102	9	22	2:1
CINSTEP/UL	NA	652	130	NA
CINSTEP/CUC	NA	NA	140	NA

Faculty-student ratios in the preservice programs are extremely low yielding very high unit costs to the institutions. While the colleges have the option of integrating these programs as minors into liberal arts majors, or assigning faculty to more than one department, these options do not exist for the RTTI's.

The 1986/7 budgets for the RTTI's, are shown in Table 2.23. The numbers indicate that even if it is assumed that one-half of the recurrent expenditures for the RTTI's are used for the operation of the demonstration schools, the cost per student in 1987 was $5,634 at the KRTTI and $13,158 at the ZRTTI. If the students' salaries (minus the $75 registration fee, texts, etc.) are added to these figures, the total per student cost to government is $8,629 and $16,153. Addition of repetition and attrition rates to the calculation would drive the total cost per graduate even higher. These high costs per student would not be justifiable even if government were not operating on an austerity budget and if all graduates, in fact, entered and remained in teaching. A tracer study of one hundred graduates has indicated, however, that only 25 percent of the RTTI graduates actually were employed as teachers.

The reduced subsector demand for teachers, particularly primary school teachers, suggests that the most cost-effective approach to teacher training at this time is not preservice but inservice. Inservice training has the advantage of drawing on a pool of candidates who already have joined the teaching force, who are less likely to be bid away since their opportunity costs are lower, and who are more likely to remain in rural communities than are new graduates from the preservice programs. The pre-service programs, both "B" level and BSc, attract candidates who are typically younger and who have higher educational qualifications and, therefore, greater opportunities. In

Table 2.23

Rural Teacher Training Institutes
Estimated Operating Expenditures
1986/7

	KAKATA	ZORZOR
Personnel Services	$129,173	$140,728
Drugs and Medicine	$3,000	$1,500
Educational Supplies	$0	$2,250
Food for Students	$109,251	$54,619
Maintenance	$1,575	$1,254
Gasoline	$4,929	$5,000
Fuel	$0	$30,000
Lubricants	$0	$1,495
TOTAL	$247,928	$236,846

Source: Bureau of the Budget, The Budget of the Government of Liberia For Fiscal Year 1986 - 1987

addition, the concentration of secondary schools in the capital and its environs suggests that the individuals eligible for these programs would be reluctant to accept or remain in teaching assignments in more rural areas.

The dependency of the MOE in the foreseeable future on the production of trained teachers through the Primary Education Project's inservice program makes the question of the certification of these teachers critical. On the one hand, certification is a substantial incentive for both participation in training and remaining in teaching. On the other hand, it has immediate recurrent cost implications. Teachers with a "C" certificate are paid $25 more a month than secondary school graduates and $27 more a month than those without a secondary school diploma. One resolution to this difficulty would be to define the PEP training as face-to-face instruction plus two years of supervised practice. Certification would be granted after the two years on the basis of a recommendation from the principal and the supervisor. This would not only postpone liability for a more expensive system but also introduce powerful performance incentives into the teaching system; incentives which the government currently foregoes by not requiring a probationary period.

2.6.2.3 Higher Education

The major providers of higher education programs in Liberia are the University of Liberia and Cuttington University College. UL offered 47 different BA/BSc majors to 4,073 students in 1987.

Sixty-nine percent of the students were enrolled in the BSc Science and Math Program or the Business program. The remaining students were spread across majors in Agriculture (5%), the Social Sciences (4%), and Education (4%). Another three percent and two percent were enrolled in Law (L.L.B.) and Medicine (MD or RN) programs, respectively. UL also offers a AA degree in library science and and a graduate degree in regional planning. Available information on enrollments, faculty, and tuition fees by college is summarized in Table 2.24.

Enrollments at CUC have remained even at approximately 900 over the past three years. The lack of growth reflects, in part, CUC's decision not to admit students on a conditional basis, and in part, the high tuition costs relative to UL.

CUC currently offers majors in 15 areas in eight departments. Thirty-nine percent of the students are enrolled in the Social Science Department. Of that 39 percent (353 students), 81 percent are majoring in accounting, economics, management, and public administration. The other departments with significant concentrations of students are science (18%) and nursing (13%). The college also offers an AA degree in Agriculture through its Rural Development Institute.

Current information on the number of students and faculty and average instructional costs by program are summarized in Table 2.25. The calculations for average instructional cost per student presented in the table are subject to special situations at the college. The relatively high per-student costs for

Theology and Humanities Departments reflect small numbers of majors, not faculty course loads. They, therefore, do not necessarily indicate any internal inefficiency. Internal inefficiency would only be indicated if these program faculty only taught those majoring in their fields rather than also being responsible for more generally attended core courses.

The UL and CUC 1986/7 budgets are displayed in Tables 2.26 and 2.27. Based on these data and those presented in earlier tables, government cost per UL undergraduate in 1987 was $1,060. When student costs are added, the total unit cost per student in the BA/BSc colleges was $1,390.

Institutional cost per student at CUC was $2,146 in 1987. The difference in costs between the two colleges reflects room and board expenses at CUC (the dormitories at UL are in such state of disrepair that they cannot be used) and maintenance of facilities and grounds. The UL campus in Monrovia suffers from the same state of neglect as the public primary and secondary schools. The pressure to complete the new campus has meant maintenance on the Monrovia campus and the proper equipping of classrooms has been foregone. The fiscal constraints of government suggests that the University proactively pursue new sources of revenue. The considerable burden of remediation, indicated by the percentage of conditional admissions, and the fact that most students combine work with study means that it will be difficult to raise tuition until such time as mechanisms exist for student loans.

Table 2.24

University of Liberia
Number of Students, Tuition & Fees,
Faculty Student Ratios By Program
1987

College	N of Students	N of Graduates	Tuition & Fees	N of Faculty	F/S Ratio*
Liberia	390	32	$290	68	1:6
Science	1065	67	$290	39	1:27
Business	1755	180	$290	30	1:59
Agriculture	198	24	$100 (fees only)	28	1:7
Teachers	156	13	$290	19	1:8
Medical	82	21	$202 (+$1000 dorm)	40	1:2
Law	119	23	$367	10	1:12
Reg.Planning	6	4	$50 (per credit hour)	5	1:1
Cont. Ed.	302	----	$13 (per credit hour)	NA	---

*Note: Faculty student ratio is not a full time equivalent count.

Source: University of Liberia, 1988

Table 2.25

Cuttington University College
Institutional Costs, Average Costs Per Student,
Faculty Student Ratios By Program
1987

Program	CUC Program Costs	N of Students	Average Instructional Cost per Student	N of Faculty	F/S Ratio
Science	$119,720	164	$730	13.0	1:13
Social Science	$109,326	444	$246	12.0	1:37
Humanities	$81,946	29	$2,826	9.5	1:3
Education	$42,946	51	$842	4.5	1:11
Nursing	$59,952	123	$487	8.0	1:15
Theology	$21,946	13	$1,688	4.5	1:3
Agriculture	$13,396	93	$144	1.0	1:93

Source: Cuttington University College, 1988

2.6.2.4 Vocational and Technical Training

Vocational and technical training consists of a variety of programs provided through public secondary schools, public out-of-school programs, proprietary institutions, private church-sponsored institutions, and programs operated by private companies for their employees.

The forty-seven identified programs are differentiated by funding arrangements as well as control. Some government support is provided for approximately 57 percent of the institutions, including proprietary schools. In addition to the obligation of some $200,000 in subsidies, the GOL annually spends approximately $600,000 on the administration of the programs. The strong support for vocational/technical education in the recurrent budget has been mirrored in the development budget. Between 1980 and 1986, vocational/technical education received approximately 17 percent of all GOL and foreign assistance development funds (Table 2.21).

Costs per student range from $30 to $70 a month for part-time clerical and commercial trades, from $1,000 to $2,000 per year in full-time day programs, and $3,000 to $6,000 in residential programs. It is estimated that approximately 7,000 full- or part-time students are enrolled in these programs.

Given government's substantial investment in this subsector as evidenced in recurrent and development expenditures, the lack of data on the subsector is disappointing. Since the decision to invest an annual $800,000 in this subsector represents a foregone

Table 2.26

University of Liberia
Budget
1983/4 - 1986/7

	Government of Liberia				
	Operating	Faculty Development	Physical Development	Other Sources	TOTALS
1983/4	$4,000,000	$300,000.00	0	$ 688,852	$4,988,852
1984/5	$4,316,665	0	0	$ 723,000	$5,039,665
1985/6	$4,316,665	0	0	$ 654,704	$4,971,369
1986/7	$4,316,665	0	$1,000,000	$1,139,676	$6,456,341

Source: University of Liberia, 1988

Table 2.27

Cutttington University College
Operating Budget
1987

1. INCOME ACCOUNT (Actual)

SOURCE	INCOME
Tuition	$870,740.00
Boarding fees	$244,783.00
Room fees	$87,074.00
Registration fees	$37,317.00
Application fees	$10,461.00
Library fees, fines, sales	$5,696.00
Breakage fees	$3,750.00
Laboratory fees	$4,000.00
Clinic fees	$1,524.00
Gas sales	$14,098.00
Overhead/CINSTEP	$58,387.00
Vehicle sales	$400.00
Gifts/donations	$31,724.00
Trust fund	$32,421.00
Bookstore	$23,476.00
Transportation fees	$1,251.00
RDI contribution	$80,610.00
Grants: ASHA etc.	$200,000.00
Farm Contribution	$30,668.00
Miscellaneous	$6,799.00
Emergency Transition Grant	$50,000.00
TOTAL	$1,795,179.00

Table 2.27

Cuttington University College
(Cont.)

2. EXPENDITURE ACCOUNT (Estimated)

Category	Amount
ACADEMIC	
Science	$117,574.00
Social Science	$107,180.00
Humanities	$79,800.00
Education	$40,800.00
Nursing	$57,806.00
Theology	$19,800.00
Extension	$11,250.00
Library	$39,640.00
Registrar	$22,440.00
Subtotal	$496,290.00
ADMINISTRATION & SERVICE	
President's Office	$101,980.00
Academic Dean's Office	$120,880.00
Finance & Admin. Dean's Office	$244,400.00
Dean of Students Office	$84,040.00
Africana Museum	$19,840.00
Monrovia Office	$18,400.00
Agape Office	$18,204.00
Cafeteria	$282,792.00
Maintenance Department	$581,056.00
Subtotal	$1,471,592.00
TOTAL	$1,967,882.00

Source: Cuttington University College, 1988

opportunity to increase investments in primary schooling to the point where they might become productive, the obligations to vocational/technical training need to be justified on the basis of documented efficiency in the production of scarce manpower. No such documentation now exists.

2.6.2.5 Summary Issues

A number of issues have emerged from the preceding discussion of enrollments and the recurrent costs associated with the major levels and types of public schooling. Crosscutting issues include: (a) the lack of data on which to base evaluation of the financing and effectiveness; (b) the scarcity of supervisory personnel, instructional materials, and maintenance support for schooling; (c) the inefficiencies indicated by high rates of repetition and low teacher-student ratios; (d) the existence, in the secondary and teacher training subsectors, of a few expensive institutions which are being financed through reduced investments in other students in that subsector; and (e) the prohibitively high (relative to average income) parental contributions to education at the pre-collegiate levels.

The issues considered separately and together point to the need for structural and organizational changes designed to increase management capacity, to decentralize the accountability for the use of local resources to the community level, and the facilitation of increased user support for higher education.

2.6.3 Unit Costs and Cycle Costs

The purpose of the cost analyses, presented in this subsection, is to provide a framework within which to consider the comparative private and social costs and benefits of the current patterns of investment in education. At each level of education discussed, costs include only recurrent expenses. No attempt has been made to calculate depreciation expense or the implicit interest cost of facilities and equipment.

Estimates of the unit costs for primary education, as well as the costs per graduate, are provided in Table 2.28.

Unit cost data were derived from MOE estimates of actual versus estimated expenditures for 1986/7 and from the payroll. The progression rates, used in the cycle cost analysis were estimated from 1984 data. While estimation of such rates from a single year is neither a general practice nor a desirable one, no other data on enrollments were available. The cycle repetition rate of 25 percent was taken from the 1987 Azango study, Decentralization and Educational Efficiency in Liberia and prorated across the years in the cycle. Since this estimate was based on schools in the capital, it is likely that it underestimates the true rate of repetition and thus the estimated costs are understated.

The data in the table indicate that only three out of every ten students who enroll in the first grade finish the elementary cycle in six years and continue on to junior secondary school. The use of entrance to junior secondary school as an indicator of

Table 2.28

Unit Costs and Cycle Costs
Public Elementary Schooling

Unit Costs

GoL	$114
Families	38
	$152

Grade Year	One	Two	Three	Four	Five	Six	Junior Secondary Entrants
1	100						
2	4	77					
3		4	70				
4			4	60			
5				4	47		
6					4	4	30
7							4

The average cost of producing an elementary graduate who is admitted to junior secondary school is 14.0 student years or $2,128 (14 times the per student per year cost of $152).

The average cost of producing an elementary graduate in six or seven years is 12.4 student years or $1,884.

Note: The progression rates from grade to grade (.77,.91,.85, .79,.88,.73) were derived from 1984 data. The progression from sixth to seventh was corrected for repetition. Repetition rates were based on the cycle repetition rates in Azango, B.B. Decentralization and Educational Efficiency in Liberia, 1987.

graduation from the elementary cycle underestimates the number of students in any given cohort who graduate in six years. This is partially offset by the fact that the students who graduate in six years are also those most likely to continue their formal education. The table indicates that the average cost of producing such a student is 14 student years or $2,128 (14 multiplied by $152).

Unit and cycle cost data for junior and senior secondary schooling are shown in Table 2.29 and Table 2.30. Progression and repetition rates were calculated from the same sources as those for elementary. Azango's estimated a 27 percent repetition rate for junior secondary and a 25 percent repetition rate for senior secondary. Information on the number of ninth and twelfth graders who sat for and the number who passed the National Examination was obtained from the West African Examination Council.

Table 2.29 indicates that the average cost of producing a junior secondary graduate in three years is 8.2 student years or $3,296 and the average cost of producing a senior high graduate in three years is 7.4 student years or $4,013. The high costs are a function of wastage, repetition, and low pass rates.

The three tables taken together suggest that the cost of producing a senior secondary graduate in twelve years is 28.9 student years (14 for elementary + 8.2 for junior secondary + 6.7 6.7 senior secondary) or $9,437. The high cost of producing graduates at each level of the system reinforces the

recommendations made for elementary and secondary schooling in Chapters 4.0 and 5.0.

Sufficient data were not available to calculate unit or cycle costs for vocational/technical training or for higher education.

2.7 Summary Analysis and Recommendations

In this section, an attempt will be made to integrate the analyses of macroeconomic developments, fiscal capacity, manpower supply and demand, and cost and returns into a more forward looking context. The discussion that follows will attempt to resolve three central questions:

- What are the major constraints to improve performance of the EHR sector?
- What are the major opportunities for such improved performance?
- What summary recommendations should be considered by the GOL and MOE?

2.7.1 Constraints

A major long-term constraint on the improvement of education and training in Liberia is the social and economic environment within which the MOE must operate. Many of the criticisms one hears directed at the MOE relate, in fact, to problems created by forces outside the administrative control of that agency. The depressed economic performance of Liberia constrains the MOE both through the reduction in budget for operations and capital

Table 2.29

Unit and Cycle Costs
Public Junior Secondary Schooling

Unit Costs

GOL	$245
Families	157
	$402

Cycle Costs

Grade Level	Seven	Eight	Nine	Graduates
1	100			
2	9	87		
3		9	88	37
			9	4

The average cost of producing a junior secondary graduate in three years is 8.2 years or $3,296.

The average cost of producing a junior secondary graduate in three or four years is 7.4 years or $3,108.

NOTE: The progression rates across grades (.87, 1.01) derived from 1984 date. The repetition rate was taken from Azango, B. B. Decentralization and Educational Efficiency in Liberia- 1987. The calculation of the number of graduates was based on W.A.E.C. figures for 1984.

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Table 2.30

Unit and Cycle Costs
Public Senior Secondary Schooling

Unit Costs

GOL	$442
Families	157
	$599

Cycle Costs

Level	Ten	Eleven	Twelve	Graduates
1	100			
2	5	92		
3		8	109	49
			12	5

The average cost of producing a senior secondary graduate in three years is 6.7 years or $4,013.

The average cost of producing a senior secondary graduate in three or four years is 6 years or $3,594.

NOTE: The progression rates (.87, 1.01) are taken from 1984 data. The repetition rate was taken from Azango, B.B. Decentralization and Educational Efficiency in Liberia, 1987. The calculation of the number of graduates was based on W.A.E.C. figures for 1984.

investment and through reducing employment opportunities for graduates of MOE programs. Of all the disruptive influences caused by the GOL budget crisis, the most serious by far has been the failure to maintain timely payment of both teachers and central administration civil servants. The resultant work stoppages--collective and individual--have seriously reduced the effectiveness of instructional programs and damaged community and parental confidence in the school system. Similarly, the inability of private schools to assure themselves of the amount and schedule of MOE subsidy payments has interfered with the orderly operation of those programs.

Unless GOL budgetary conditions improve--and that requires both improved fiscal management and an improvement in the nation's economic performance--this major constraint on MOE effectiveness will not be reduced. The response of the MOE in the interim is to avoid the temptation of surrender to these external forces. Rather, it is the responsibility of the MOE to make the best possible use of its available resources in order to meet its obligations to students, parents, and the economy.

There are several other constraints, however, that are more specific to the MOE that will make this job exceedingly difficult. First, while some solace may be gained from the knowledge that the MOE's budget reductions are shared by other agencies, the fact is that no other agency, with the possible exception of the security forces, operates in such a public context. The education system is, for many individuals, the

institution of government with which they have most frequent and substantial contact. While problems in other ministries or agencies may go unnoticed, the same problems occurring in the MOE rapidly become topics of community debate, news stories and, ultimately, political controversy.

Because of the public visibility of the MOE's operations, there is rarely an opportunity for slow and careful analysis. The public expectation of rapid correction of education and training problems exerts its own constraining force on the possibility of more substantial reform.

A more basic internal constraint faced by the MOE is the nature of its own operations. Because schooling and administration--the two basic functions of the MOE--are both labor-intensive activities, the MOE operates with a budget that is dominated by personnel costs. Since civil service employees also exist as an important political force, the MOE often is limited in terms of budget reallocations to reducing its small amount of non-personnel activities. When this is insufficient to meet the budget limitations, contractual obligations do not allow an immediate reduction in staffing. Rather, the only budget policy alternative is to postpone salary payments with the resultant damaging effects on staff morale and a redirection of staff attention from educational outcomes to personal economic concerns.

In recent years, the MOE also has found itself constrained by an almost complete stoppage of its data collection,

assimilation, and analysis functions. Even basic data on enrollments and attainment are incomplete, and no regular data validation process operates. The standard explanation given, the shutdown of the MOE's mainframe computer, is, in fact, a non-sequitur. The inoperative condition of the computer should have no direct bearing on data collection efforts and, with the availability of microcomputers, many useful forms of analysis could still be conducted if data of acceptable quality and coverage existed.

The current data problems persist for two main reasons. First, the World Bank project to create the MOE data system was never able to institutionalize its operations or to create a necessary core of MOE staff with the capacity to maintain the system's effectiveness. However, the lack of local capacity has been matched by a lack of local commitment on the part of MOE staff and officials. Data management and databased policy development simply has not been a priority topic within the MOE.

Given the conditions under which the MOE has had to operate in recent years, this is understandable if not fully excusable. In a period of educational disruption, when funding levels do not allow the normal daily operation of schools, information on student-teacher ratios or cycle costs may appear of trivial importance or a luxury beyond the MOE's ability to finance. However, the lack of data has become a major barrier to both short-term adjustments and long-term reform of education and training programs.

As has been indicated in the discussions of this chapter, one can do inferential analysis beyond the point where data allows proof or confirmation. The problem is that such analysis leaves the MOE with recommendations that it fully believes should be enacted but without the data necessary to document either the need for change or to justify the preference for one alternative over another. The recommendations made at the end of this chapter will be harder to implement in a highly politicized environment if data improvements are not made soon.

Finally, while one can recognize the external constraints and internal rigidities that have limited the MOE's effectiveness, some responsibility remains solely for the MOE itself. Because of bureaucratic structures and personnel assignments that are not predicated on efficient delivery of services, the MOE has not been as effective as it should have been at insulating its operations from the worst effects of the constraints that do exist. While credit does accrue to certain individuals and agencies within the MOE for their efforts during these difficult times, there is an overall problem of the professional capacity of MOE staff and the morale with which they conduct their work.

It is the responsibility of the MOE central staff to take the lead in efforts to revitalize the system of education and training. There is little doubt that there is much the MOE <u>can</u> do, even under the continued expectation of financial limitations, inadequate support staff and equipment, and

increasing demand for its services. The remaining question is what the MOE will do over the next five years to restore morale to its staff and effectiveness to its operations.

2.7.2 Opportunities

The opportunities for improvement that do exist are multiple and are detailed for the individual education and training subsectors in the chapters that follow. Here, the focus will be on more aggregate and systemic opportunities for change and reform. The discussion will be divided into three parts covering issues of personnel, system management, and programs.

The most important single improvement opportunity that exists for education and training in Liberia is to use more effectively the personnel who already are employed in the system. First, the teachers in the schools require motivation, material support, and assistance to fulfill their classroom duties. In primary education, the Primary Education Project (PEP) of the MOE offers an excellent chance to achieve this goal. If implemented properly, the PEP can have a significant impact on teacher effectiveness with a minimum of additional resource demand.

In secondary, vocational/technical, and higher education the improvement in the efficient use of personnel will require the development of a more realistic set of expectations about what teachers and professors in these programs can hope to accomplish given the context of continued shortages in material support. It is necessary to focus the curriculum in each program so that the instructional goals are not excessively diverse and

self-defeating. Those responsible for instruction must not be burdened with a variety of low-priority, non-instructional responsibilities. The MOE can assist by sharing with Liberian teachers the experiences from other countries for low-cost but effective instructional approaches at the postprimary level.

The second improvement opportunity in the area of personnel is in the supervisory system. The MOE is conducting a study of supervision concurrent with this sector assessment activity. The detailed findings of the supervision study should become the basis for a long-term reorganization of these personnel to ensure that they have a clear understanding of their responsibilities and that they are provided the material resources (e.g., fuel allowances) necessary to conduct their supervisory activities.

The third personnel opportunity lies in the area of MOE central management. Senior and middle-level managers of the MOE must become more directly involved in the delivery of services to schools and other educational institutions. The recommendations of the February 1986 study by the Civil Service Agency's Job Inspection Unit should be reviewed carefully to determine which proposals for staff reduction can be implemented without severe effects on the MOE's operations. The Job Inspection Unit report suggests a reduction of 162 positions at an initial salary saving of $539,182 per year. These savings could then be redirected to provide the support costs for communications, supplies, and transportation necessary to make the remaining MOE administrative personnel more effective.

The second major area of opportunities for education and training improvement is in the area of management. Chapter 3.0 on management capacity will deal with these issues in some detail. For present purposes, however, the major management opportunities to be considered are decentralization to mobilize local community support, better definition of the administrative responsibilities of supervisors and other MOE field staff, and improvement in the data collection and program planning responsibilities of the Ministry.

The proposal to allow school fees to be kept at the school level and to be managed by a local educational authority has been discussed earlier. A failure to take advantage of this opportunity may lead to a growing disillusionment by parents with the school fee system and a reemerging disenfranchisement of community interest in the operations of schools.

The management role of supervisors will again be a topic dealt with by the current study of the supervisory system. It is important for the MOE to recognize the joint responsibility currently allotted to these individuals for both instructional support and system management. The requisite training for these two tasks is different as are the support needs. The analysis of the supervisory system thus has both a personnel dimension (how many are required, what is their instructional support role, and what support resources are needed?) and a management dimension (how should the system be organized, how will authority for management tasks be delegated, and what complementarities and

conflicts exist with the supervisory role?). The resolution of these questions pertaining to supervision would be a major step forward toward improvement of Liberian primary and secondary education.

Again, the issue of data needs and planning has been touched on several times in this chapter. It is sufficient to note here that effective fulfillment of these two roles is necessary if the MOE is to reassert itself as the focal agency for long-term development and management of the education and training system. A Ministry of Education that does not have a capacity for data management and planning (especially in the areas of cost analysis and manpower utilization) can be operated as an implementing agency for another ministry and does not justify the degree of autonomy presently possessed by the MOE.

The final area for education and training opportunities is in improved program implementation. Normally, a sector assessment report will propose a series of new program initiatives for the implementing ministries. In the case of Liberia in 1988 that would be an irresponsible emphasis. The sole priority of the next few years should be to make the existing programs successful. This does not foreclose on innovation or even experimentation. However, such efforts should be made within the limits of available human and financial resources and should not be undertaken at the sacrifice of any basic educational services.

Earlier in this chapter, specific suggestions were made as to how different parts of the MOE's programs might be dealt with in future years. Even if there is disagreement over some of the specific suggestions, there should be little debate over the need for a detailed planning agenda and the implementation of a set of clear and specific priorities among the various levels and types of education and training.

If new programs are undertaken, the full financing of the developmental stage and an assurance of MOE capacity to finance future recurrent costs must be made. The MOE must insist that donor support be primarily, if not exclusively, grant support and that the donor be sufficiently committed to the project activity that assistance for recurrent costs will be phased out slowly at the end of the project cycle rather than ending abruptly as is now the usual case. The MOE's emphasis should be that it is willing to engage with donors in long-term program support activities but not in abbreviated project exercises that leave little trace after three to five years, except a higher level of recurrent cost burden for the MOE.

It is understood that both human and financial resources will be required to convert these opportunities into actual program improvements. However, the commitment of the government and of the personnel in the education and training system to a plan for improvement is just as important as the availability of resources. Systematic and long-term approaches to the existing education and training issues are needed. Ad hoc attempts at

reform can have an effect but they can never achieve the results possible from a planned effort which integrates resources and opportunities in a complementary manner in order to maximize goal attainment.

2.7.3 Summary Recommendations

Throughout this chapter, individual suggestions and sets of suggestions have been presented for consideration. In this section, these suggestions will be supplemented by a few summary recommendations that deal with the general economic and financial problems faced in Liberia and their specific impact on MOE programs.

As noted earlier, the resolution of the GOL's recurrent budget problem will have three salutary effects. First, it will end the incurrence of arrears and slow the growth of the debt burden on the GOL budget. Second, it will go far to reestablish consumer and investor confidence in the local economy. And third, it eventually will lead to the reinitiation of IMF and World Bank support to Liberia. This assistance will be necessary even if the export-based sectors of the economy should stage a major (and, at present, this is unlikely) recovery. The period between now and 1992 should be viewed as a period of reconstruction; a time during which the nation reestablishes a foundation for future economic growth. Excessive optimism at this time among government officials should be guarded against

while at the same time these officials work to promote reduced private sector pessimism.

Program-based budgets, expenditure controls, and stabilization of the currency are all steps the GOL should consider for implementation. However, without the reduction and the eventual elimination of budget deficits, these other efforts will have little effect.

The Ministry of Education must focus its efforts on cost containment and quality enhancement in primary education and, to the extent possible as a second priority, in secondary education. It must be remembered that the demand for education is derived from personal, cultural, social, political, and economic needs. Education becomes a right to all citizens only when the society becomes capable of providing a sufficient quality of education to all students. Increasing access to an inadequate education is a disservice both to the new and the existing students and is neither equitable nor efficient. The MOE's priority emphasis must be to attain an acceptable standard of effectiveness in all of its schools and only then, to the degree resources allow, to extend access to new student populations.

A special summary recommendation is for the MOE to utilize private sector resources more effectively to attain its goals. The continued encouragement of private educational institutions, of parental and community assistance in financing public education and of linkage to the private sector enterprises by vocational/technical and higher education institutions will

allow a maximization of the effectiveness of the Ministry's own scarce resources.

Finally, the last summary recommendation is to call for a joint MPEA-MOE task force to improve data on the education and training sector. A major responsibility of the task force should be to review existing data systems to determine whether they require reform or only mobilization in order to be effective. All education and training projects (and proposals for change or new activities) should be reviewed jointly by the MPEA and MOE based on the data generated. The priority forms of data required are those that relate to enrollments, staffing, attainment, achievement, access to instructional resources, supervisory assistance, and costs.

The suggestions and summary recommendations contained in this chapter have been both short- and long-term. Some involve activities the GOL can conduct on its own, and some will require donor assistance. However, what is needed <u>is</u> <u>not</u> the implementation of a set of individual proposals; there must be an integrated plan. Only through the long-term implementation of the programs from this plan can substantial progress be achieved. An integrated plan, making use of existing personnel and facilities, emphasizing cost containment and avoidance of recurrent costs, and assisted by appropriate donor support for transitional expenditures should be the goal of the MOE's upcoming Five-Year Plan development activity.

The following chapters in the assessment report provide greater detail on many of the programs and policies discussed here. In reviewing those later chapters, it is essential to keep in mind the nature of the economic and financial environment within which those activities have been developed and will continue to operate.

3.0 MANAGEMENT

3.1 Introduction

The attainment of Liberia's goals for educational development are directly dependent on the managerial capacity of its public and private institutions. The administrative systems in Liberia, especially in the public sector, are constrained by (1) an inefficient set of recruitment, promotion, and incentive (monetary and non-monetary) systems; (2) a low state of applied information methods and technology; (3) an inexplicit definition of goals and performance standards; and (4) an inconsistent and often arbitrary enforcement of personnel and organizational accountability.

Obviously, given the state of Liberia's aggregate economy and fiscal conditions, finance also is a constraint. However, resolving the financial problem will not, by itself, increase management effectiveness unless the aforementioned constraints are dealt with at the same time.

The shortage of qualified administrators, especially at the middle management and technical support levels, remains a major barrier to the attainment of Liberia's development goals. In spite of past and current efforts of the Civil Service Agency, and certain senior ministerial staff in individual ministries, to improve the degree of rationality in recruitment and assignment policies, much improvement still is required. Too many appointments, some of which are at quite senior levels in certain ministries, are made based upon criteria other than institutional

requirements and personal qualifications and competencies. In addition to the specific and immediate negative effect of h ving individuals who are not competent to perform their assigned tasks, such employment practices have more extensive and longer range negative effects on employee morale and commitment to official standards of employee conduct.

To the extent that administrators and supervisors are unable to reward or sanction their subordinate staff, management systems simply cannot operate. The final results include an excessive reliance on personal and family loyalties rather than administrative structures to determine interpersonal relationships, relaxed attitudes toward the fulfillment of job responsibilities, centralization of decisionmaking at a level far removed from delivery of services, the abandonment of data-based argument, and inefficient allocations of manpower within and among the various government agencies.

The 1983 Education and Training Sector Assessment chapter on management deals with the general issues of Liberia's management environment and the sources for management training Liberia. Management capacity will be discussed in this assessment in terms of two main perspectives. The first is the general capacity of the Ministry of Education (MOE) to support the development activities related to the education system. The second is the manner in which the internal structure and operation of the Ministry of Education affects its ability to implement, maintain, and improve educational activities. Subsequent chapters will

address the specific administrative and supervisory issues which affect the specific subsectors of the education system. Attention in this chapter focuses on the more generic problems faced by the Ministry of Education, both those that cut across subsectors and those that pertain to management of the entire sector. For purposes of this assessment, management capacity is defined as the ability of an individual, a group, or an organization to acquire and use resources (material and human) to achieve individual or collective goals.

While this chapter focuses on the Ministry of Education, it should be made clear that the problems and constraints discussed here are not unique to the MOE; in fact, most could now be characterized as endemic to the government civil service. However, this does not free the MOE and its senior personnel from the need to continue their efforts to improve the internal operation of their organization and, to the extent possible, to insulate the MOE's activities from the disincentives and inefficiencies imposed upon them from external factors.

This chapter first describes the recent history and current status of management in the education sector including the present organizational structure. Recent efforts of GOL and the Ministry of Education to maintain and improve management capacity are described. The four key constraints to effective management of the education sector are reviewed in detail. This discussion then leads to a series of conclusions and recommendations for strengthening the capacity of the MOE to support the delivery of

quality instruction in the schools, to manage educational development activities, and to improve the efficiency of the administrative structure of the Ministry.

3.2 Historical Background

Prior to 1900, authority over the few public schools that existed was decentralized. Each county had a commissioner of education who in turn reported to the Secretary of Interior. School committees in the individual settlements were responsible for taking a quarterly census, checking teacher performance and facility maintenance. Over the years, Liberia's national educational interests developed and took precedence over regional and local concerns. In this vein, education became centralized, in law if not in fact, following the creation of a Department of Public Instruction and Common Schools in 1912. However, as the vast majority of educational activities in the country remained under missionary control, the system still operated as a decentralized structure. It was not until 1950 that Government made a concerted effort to increase its influence over education. An access expansion policy resulted in a substantial growth in the number of public schools and enrollment (see Table 3.1). As a result, the management of public sector decisionmaking increasingly was centralized and controlled from Monrovia.

The growth of public education over the thirty-year period (1950-1980) was substantial; an 820 percent increase in the number of schools and a 1356 percent increase in enrollments took

Table 3.1

Comparative Growth in Education by Type of Management
1950 - 1980

	Management	1950	%	1960	%	1970	%	1980	%
School	Public	117	43	410	64	709	65	1077	65
	Non-Public	153	57	235	36	375	35	574	35
Enrollment	Public	10995	45	43010	70	86520	64	162250	58
	Non-Public	13530	55	18420	30	49220	36	116850	42

Source: B. B. Azango, Decentralization and Educational Efficiency in Liberia, 1987, pp. 8-9.

place. Expansion in the non-public sector was relatively modest in comparison, a 275 percent increase in the number of schools and a 763 percent increase in enrollment.

Prior to the Ministry's decision to decentralize administration, an independent body, The Monrovia Consolidated School System (MCSS), was established in 1963. The project, funded by the GOL and USAID, with technical assistance provided by San Francisco State University, was completed in 1972 and resulted in a relatively well organized public school system (Azango, 1987, p. 4). MCSS still has considerable autonomy and is funded by a direct appropriation from the GOL through the Ministry of Education.

As part of GOL interest in encouraging local participation in government, a management assessment was conducted in 1978, with funding provided by the United Nations. The assessment resulted in an executive order that included strategies for the deconcentration of authority from central government agencies in Monrovia to their representatives in the counties (RDTF, 1979). As part of this larger GOL effort, the Ministry of Education in collaboration with the Liberia Institute for Public Administration (LIPA) undertook a reorganization of the Ministry. In line with other agencies in the public sector, regional and county offices were established in order to provide for the distribution of materials and information.

County Education Officers (CEOs) in each county were to have administrative control over the schools in their counties.

Included in their responsibilities were the preparation and operation of the budget and the authority to employ, suspend or dismiss school staff. It was intended that the MOE would streamline its central office activities to accommodate the transfer of authority to the field (Azango, p. 11).

Though appointed, Regional Education Officers (REOs) did not move to the field until there was a further call for decentralization during the 1981 National Conference on Education. Subsequent negotiations with the World Bank resulted in the construction of regional education centers in Paynesville, Gbarnga and Zwedru. The purpose of these "middle management" regional centers was the location of an education authority closer to the source of school-based supervision, administration and facility problems. The assumption of government was that MOE policy decisions would be easier to implement with a system of regional rather than central control.

3.3 Current Status of Educational Management

The need to strengthen the management capacity of the Ministry of Education has been a recurrent theme of all major GOL and external assessments of the education system in the last twenty years. The National Education Plan 1978-80 listed among the problems of the system, "poor organization and administrative control." The Second National Socio-Economic Development Plan 1981-85 considered the central offices of the Ministry of Education to be "heavily loaded with administrative personnel and

short of technical and middle level staff." The plan concluded that only limited analytical activity preceded important decisions which have had far reaching implications for the efficient development of the education sector. Additional calls to improve MOE's management strategies appeared in the 1983 USAID/GOL Education and Training Sector Assessment and the report of the 1984 National Conference on Education and Training.

3.3.1 National Goals and Priorities

The long-range goals presented in the National Education Plan, 1978-80 were stated in four priority statements. The third priority, after qualitative improvement of the education system and improved vocational and technical education, was to strengthen the organizational and managerial infrastructure of the education system, including regional decentralization and control.

3.3.2 Organizational Structure of the MOE

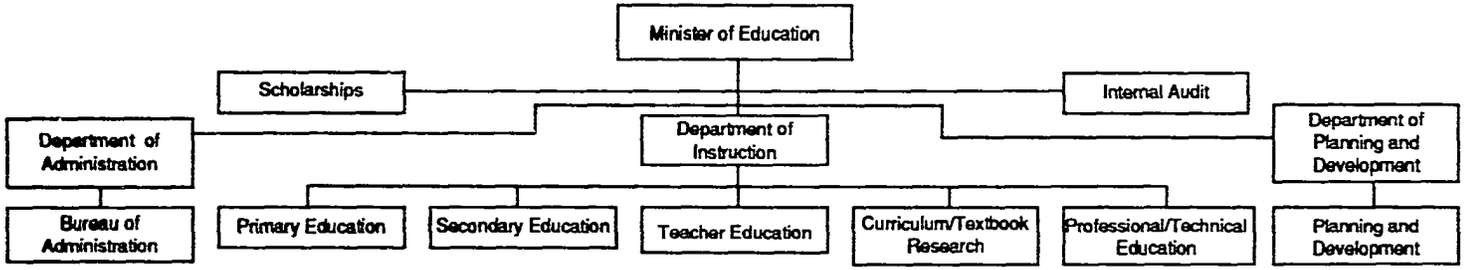
The organizational structure of the MOE, presented in Figure 3.1, is hierarchical in design. Below the Minister are the three Departments of Administration, Instruction, and Planning (each headed by a Deputy Minister), seven Bureaus (headed by Assistant Ministers), one Comptroller, and 38 Divisions (each headed by a Director).

The primary functions of the Departments are:

Administration: financial and administrative management of the Ministry, procurement and distribution, personnel, supervision of the library system and the sale of textbooks;

Figure 3.1

Organizational Chart: Ministry of Education



Finance	Preprimary Education	Instructional Supervision		Curriculum Development	Vocational/Technical Ed.	Planning and Management
Personnel	Primary Education	Regional Education Offices		Textbook Research	Adult Education	Ed. Projects Preparation
Transportation	Instructional Supervision	Country Education Offices	Teacher Education	County Curriculum Materials Centers	Agriculture Education	Educational Facilities
Warehousing/ School Supplies	Country Education Offices	Science Education	Teacher Certification	Physical Education	Music Education	Info. Systems/Data Services
School Feeding	District Ed. Offices	Parochial Ed. Programs	Rural Teacher Training Institute/Kakata	Media Education	Home Economics	Research and Publications
The Bookstore	Instructional Materials Dev. and Evaluation	Instructional Materials Dev. and Evaluation	Rural Teacher Training Institute/Zorzor			Project Implementation
Central Filing						UNESCO Secretariat
Textbooks	Health Education	Guidance and Counselling	Teacher Accreditation			
Buildings and Grounds		Cultural Enrichment and Exchange Programs				
Security						
Procurement						

Instruction:	primary and secondary instruction, supervision, vocational/technical education, teacher education;
Planning and Development:	directing, coordinating, and supervising long- and short-term plans and monitoring all external assistance.

The decentralized administration structure consists of the aforementioned REOs, CEOs and District Education Officers (DEOs). DEOs report to CEOs on administrative matters and to the Assistant Minister for Primary Education on issues of instructional supervision. CEOs report to REOs on administrative matters and to the Assistant Minister for Secondary Education on issues of instructional supervision. REOs report to the Deputy Minister for Instruction on administrative matters.

The major policy-making body of MOE is the Senior Staff chaired by the Minister. It includes Deputy and Assistant Ministers, the Comptroller, Legal Counsellor, and the Directors of Personnel, Educational Facilities, the Project Implementation Unit, and Information Systems and Data Services.

The present MOE administrative system has a vertical structure, and attempts are made to encourage the "chain of command", especially at the higher levels of administration. Communication within the Ministry is theoretically structured along organizational lines and defined in job descriptions. As there are few directly enforced regulations concerning reporting procedures among personnel, the informal communication system is active at the expense of the formal vertical structure.

3.4 Efforts to Strengthen Management Capacity

The Ministry has undertaken a series of initiatives to improve the management capacity of the Ministry over the last ten years. These efforts include the decentralization of administration, a series of reorganizations of the central MOE structure, and administrative management and supervisory training of MOE personnel. Each of these initiatives will be described below and their impacts assessed.

3.4.1 Decentralization

In 1978, the MOE appointed a Chief Education Officer (now called County Education Officer) for each county who reported through three newly appointed Regional Education Officers (REOs) who operated from Monrovia. Studies of the education system conducted by both the World Bank and USAID during the 1980s found that a major factor contributing to administrative inefficiency continued to be the highly centralized government administration of the education system. This centralization made it difficult to manage personnel and to deliver services effectively in rural areas. Supervisors lacked training and many lacked transportation to visit the schools. Under the Fourth World Bank Education Project, a priority was to decentralize this supervisory system by creation of regional education centers, provision of eight vehicles to be used by the inspectorate, eight fellowships for training in educational administration, inservice

training workshops in education administration, and some limited technical assistance in educational supervision.

The current judgment of nearly all educators and MOE officials interviewed is that the decentralized administrative structure has not operated effectively, not because decentralization is a poor idea, but because the system was never fully implemented and has encountered a series of unanticipated problems. The major problem is that the present system decentralizes responsibility without decentralizing authority or finances. County and District Education Officers have little authority to move, reassign, or fire teachers or principals. For the last three years, Education Officers (at all levels) have had no operating budget with which to provide intended services, no transportation to visit schools, and have not been reimbursed for professional trips to Monrovia. These constraints are cited as one of the primary reasons that many Education Officers have not collected or reported basic enrollment data for schools in their area for the last three years.

Job descriptions and lines of authority are unclear: DEOs and CEOs each report to different MOE offices with respect to their administrative and instructional supervision roles, and those central offices do not coordinate their instructions to the field staff. Due to poor communications and lack of operating funds, central MOE is unable to service the needs of the decentralized staff. REOs, for example, are unable to get a current list of teachers in their region.

Finally, schools have a financial disincentive to cooperate with MOE field staff. At present, most Education Officer contact with schools is to collect money raised through student registration charges, special fees, and other assessments. These funds are used to cover operating expenses at the District, County, Regional, and central MOE levels. Little, if any, of these funds are returned to the school in the form of instructional materials or supplies. Since schools have no operating or instructional materials budget from the Ministry, school administrators sometimes choose to underreport (or not report) school level data to mask the retention of locally generated funds at the school level.

Consequently, the decentralized administrative system does not result in improved communications between the Ministry and the schools. Rather, it is seen as a financial drain on resources that could otherwise be directed to improving instructional quality at the school level. MOE field staff presently function with considerable autonomy. Ironically, that autonomy is not the intended result of the Ministry's decentralization policy, nor is it reflective of the desired purposes of decentralization. Thus far, field offices appear to have little positive impact on the day-to-day running of the schools or on an improved information flow between the schools and the Ministry. Moreover, the drain on local resources posed by this decentralized administrative system may inhibit instructional quality as student fees are used to support MOE

field staff rather than for the purchase of instructional materials.

3.4.2 Administrative Reorganization

In addition to the decentralization of Ministry operations, there have been two administrative initiatives which have an impact on the organization of the central MOE management structure. The first was undertaken by the Liberian Civil Service Agency as part of a larger civil service reform; the second grew out of efforts to reconcile the IEL instructional system and the World Bank textbook project.

Since 1984, the GOL has experienced serious financial difficulties that have constrained development in all sectors. These financial difficulties led to a GOL default on debt repayments to the IMF and the World Bank and delays in repayments of some bilateral loans. This resulted in suspension of IMF and World Bank disbursements in 1985, further exacerbating the financial plight of government.

The public sector wage bill is one principal factor in the current financial crisis. For example, in 1987, over 95 percent of the GOL expenditures on education (preprimary through grade 12) was for salaries. In response to the worsening financial situation and under pressure from donors, GOL initiated a civil service reform aimed at reducing the number of civil service employees by up to 17 percent. Since the MOE represents approximately 25 percent of all public sector employees, it is

anticipated that the Education sector could be particularly hard hit.

To accomplish the reduction, each ministry was to undergo a Job Inspection conducted by the Civil Service Agency to identify potential areas of retrenchment. A job inspection of the MOE central office in Monrovia conducted in 1986 concluded that the central administration of the Ministry was overstaffed. The inspection team found that, of the 205 people interviewed, 66 percent carried a workload of under 50 percent; 34 percent carried a workload of below 25 percent. The Inspection Report recommended a 35 percent reduction in staff (162 people) for an estimated savings of $539,182. Their report concluded with specific recommendations for reorganization of the MOE to reduce excess personnel and improve efficiency. A summary of their proposed manpower reductions is presented in Figure 3.2. The Ministry of Education is still reviewing the Commission's recommendations. The retrenchment effort offers the MOE the opportunity to reduce underemployment and reorganize administrative structures in ways that could enhance the effectiveness and efficiency of management. It will also free funds to be used to make the remaining staff more effective in fulfilling their responsibilities.

At present, the GOL hopes to meet the targeted level of staff reduction across the civil service through normal attrition, normal retirements, and an incentive program for early retirements and severances. Under the incentive program, the

Figure 3.2

Manpower and Payroll Reductions for the Ministry of Education Central Office Staff Recommended by the Liberian Civil Service Agency (1986)

DIV./UNIT/SECTION	Present No. of post	Proposed No. of Posts	Total 1986 Payroll	Total Proposed Payroll	Proposed Manpower Reduction	Intended Payroll Reduction
1. Education Facilities/ Planning & Implementation	15	13	80,242	47,598	7	32,644
2. Bureau of Administration	8	5	37,423	24,381	3	13,042
3. Dep. Min. of Admin. Office	5	4	16,400	14,400	1	2,000
4. Planning Unit Section	10	6	43,600	29,900	4	13,700
5. Finance Section/Admin Div	20	11	51,052	30,300	9	20,752
6. Warehouse Section/Admin. Div	11	3	38,597	6,950	8	31,647
7. Home Economic/Cosmetology Section	12	0	57,966	0	12	57,966
8. Security Div./Admin. Div	38	23	96,170	65,370	15	30,800
9. Dispatch Section/Admin.Div	2	2	5,500	5,500	0	0
10. Teacher's Education/Sup.	4	4	23,200	23,200	0	0
11. Transport Div./Admin.Div	30	23	49,496	38,876	7	10,621
12. Scholarship Div./Admin. Div	10	5	48,700	15,357	5	33,343
13. School Feeding	5	0	18,824	0	5	18,824
14. Govt. Bookstore/Admin.	13	0	39,000	0	13	39,000
15. National Secretariat	6	4	23,200	18,700	2	4,500
16. Community School Program/Admin.	6	5	31,857	25,857	1	6,000
17. Personnel Div./Admin	11	7	52,660	39,300	4	13,360
18. Bureau of Profession/ Tech. Education Sup.	17	12	85,740	75,140	5	10,600
19. Student Per. Services/ Supervision Division	14	10	60,673	45,673	4	15,000
20. Radio Media/Administration	5	0	18,700	0	5	18,700
21. Minister's Office/Admin.	15	5	75,639	32,032	10	43,607
22. Early Childhood & Adult Education Divisions	9	6	42,267	37,867	3	4,400
23. Printing & Production/Admin.	7	0	16,816	0	7	16,816
24. Statistics Div./Planning Div.	9	4	34,300	13,500	5	20,800
25. Building & Grounds/Admin.	28	17	66,919	43,469	11	23,450
26. Research & Publication/ Planning Division	7	5	31,000	22,100	2	8,900
27. P.I.U.	16	7	62,152	32,462	9	29,690
28. Div. of Curriculum Develop./ Planning	21	16	79,500	60,500	5	19,000
				TOTALS:	162	539,182

Source: Civil Service Agency Job Inspection Unit: Report on Ministry of Education Headquarters, 1986.

GOL, with financial support from USAID, will provide a severance payment to employees who voluntarily leave public sector employment.

It is too early to determine the impact of the incentive program to encourage staff reductions. However, one year following the issue of the Inspection Report, the Ministry of Education has not implemented any of the recommendations. Rather, the MOE, with Cabinet approval, created three additional Assistant Minister positions in response to recommendations made by a team looking at ways to integrate the activities started under the World Bank textbook project and the USAID funded IEL project.

In a separate activity, as part of designing the Primary Education Project, the Ministry and USAID collaborated in a study to identify ways to integrate the World Bank funded textbook project and the USAID financed IEL project. The overlap between these programs is discussed in Chapter 4.0. The study team recommended consolidating coordination of primary education under one office and creating the position of Assistant Minister of Primary Education. However, as part of implementing this recommendation, the MOE created three new assistant minister posts (for primary, secondary and teacher education). This change was approved by the Cabinet and implemented in 1987. While it added new posts, it did not increase overall staff size since the people promoted into the new positions were already on the MOE staff.

While this reorganization is too recent to permit an assessment of its impact, early indications are that the consolidation of responsibility in these three areas under Assistant Ministers can help improve the efficiency with which educational services are delivered. However, some confusion continues. Job descriptions appear to overlap, particularly between the Bureau of Primary Education and the Bureau of Teacher Education. The authority of the Assistant Minister for Primary Education over the activities of the DEOs and the Assistant Minister for Secondary Education over the activities of the CEOs need to be clarified and affirmed, to the extent this decentralized structure is continued. These ambiguities need to be resolved if the reorganization is to be successful.

3.4.3 Management Training

Degree level management training is offered through the University of Liberia, Cuttington University College, and donor-financed study abroad. Short-term administrative, management, and supervisory training has been offered through the Liberian Institute of Public Administration (LIPA), the Civil Service Agency, the Agricultural and Industrial Training Bureau (AITB) and MOE inservice training activities. The training opportunities provided by each are described below.

3.4.3.1 Long-Term Training

Long-term (degree level) management training opportunities have been available in three ways. The College of Business and

Public Administration at the University of Liberia offers baccalaureate level work in economics, accounting, management and public administration. The School of Education at Cuttington University College (CUC) offers a bachelor's degree in educational administration. Finally, degree level study abroad has been a major source of middle and upper level management training across all Ministries.

Baccalaureate preparation in business or public administration has not been a common career path for administrators in the education sector, and UL graduates in those areas tend to have more attractive offers in other sectors of the economy. The CUC program in educational administration has suffered serious enrollment declines and, at present, has only five students. No statistics are available as to how many graduates from this program currently are employed by the Ministry of Education. However, the low enrollments suggest it is not a major source of management and administrative training for the education sector.

While specific data are not available on the extent of foreign study, ten of fifteen MOE senior staff surveyed hold graduate degrees, nine of which were earned in U.S. institutions. Much of this training was funded through World Bank fellowships associated with the four Bank development projects. Future prospects for foreign study are poor, due to the suspension of World Bank activities in Liberia and the financial difficulties the GOL is experiencing.

3.4.3.2 Short-Term Training

The Liberian Institute of Public Administration is a national staff development institution that assists government departments, parastatal organizations and the private sector in developing management, supervisory and clerical skills. During 1985-1986, it conducted short courses and workshops on topics such as general management, program management, training methods, and financial management. There is no record of the extent that MOE personnel have received training through LIPA. However, the Institute suffers from an ongoing shortage of instructional staff and training materials which is thought to result in low quality of the training offered. An alternative is the Agricultural and Industrial Training Bureau (AITB) which houses a Center for Supervisory Training. While it focuses on middle management development in the private sector, in 1987 it offered some public sector training. MOE personnel have not yet participated in this opportunity. Finally, the Civil Service Agency (CSA) is mandated to provide short-term skill training in management development. It has been hampered in this by inadequate funds and a shortage of qualified trainers.

The MOE has undertaken some management development training, organized by the Departments of Instruction and Teacher Education. There are usually one or two courses each semester on topics such as general management, teacher training methodologies, and supervision. The courses are short but well attended. The MOE also is in the design phase of a large scale

instructional supervision training program as part of its Primary Education Project. All primary school principals are expected to receive one week of inservice training in instructional supervision by 1992. Part of this training will address school-level record keeping and management practices.

The impact of these programs on improving the management capacity of the education system is difficult to estimate since several of the programs do not record course enrollment regularly, most of the programs operate without clear indicators of the quality or effectiveness of the training they provide, and none of the programs track the career paths of their graduates. However, the overall impact of the available training on improving the management capacity in the education sector is probably minimal. The training appears to reach a relatively small number of people, not all of whom work in education or even in the public sector. Further, several of the training programs suffer from lack of an operating budget, inadequately trained instructors, and a lack of instructional materials.

3.5 Analysis

3.5.1 External Efficiency

The external efficiency of MOE management is reflected in the delivery of services, specifically those that support and improve the delivery of quality instruction in the schools. For reasons previously described, the Ministry of Education continues to have serious problems in maintaining and operating a

management system that facilitates this end. The lack of operating funds at the central, regional, county, district, and school level restricts transportation and results in little or no communication or contact between school and Ministry personnel, or among Ministry personnel at different levels. For lack of funds, the MOE provides little or no instructional materials to the schools. For lack of transportation, little or no instructional supervision occurs. Education Officers have provided only incomplete and intermittent school level data to the MOE, hence, it has no current data on the size or distribution of the education system.

The problems posed by these constraints go beyond the inability of the MOE to perform intended functions. The decentralized structure of the MOE, as it now operates, may actually inhibit delivery of quality education at the school level.

In 1987, the decentralized staff of the MOE included 318 professional and support personnel, whose salaries totaled approximately $995,000. Their primary activities during this time were the collection of student fees and, at the county level, the distribution of teacher paychecks. While these activities are only a small part of their job description, the personnel are constrained by lack of operating funds from performing many of their other functions (e.g., instructional supervision, data collection, etc.). Based on estimated 1986 enrollments, and assuming Education Officers are able to collect

registration fees or $5 per student per year at the primary level and $30 per student per year at the secondary level, total collections would be approximately $896,330. The cost of maintaining the decentralized administrative structure is more than the total amount that Education Officers are able to collect; and, the ability to prorate their costs over other services they perform has been constrained by their inability to perform many of those services.

The student fees Education Officers collect help cover operating expenses of the various administrative levels of the MOE or are diverted for other uses. Little of the money returns to the school in the form of instructional materials or supplies. Hence, under current conditions, the operation of the MOE management tends to remove funds from the schools that could be used at the school level for instructional materials without a corresponding return to the school of educational benefits. Since the economic conditions constraining the full performance of the MOE field staff are unlikely to change, there is a need to reconsider the present system.

As discussed in Chapters 2.0 and 4.0, school fees should be left at the school level to be used for instructional materials, supplies, and facilities repair that contribute more directly to improved education. This would help realize the MOE's intention to truly decentralize. At the same time, it would eliminate many intermediate positions that cannot be funded sufficiently to allow effective performance. The present field staff should be

reassigned to activities more directly related to instructional delivery. In particular, use of the present field staff at the secondary level as administrators and instructors could improve the quality of secondary education. County Education Officers should be retained but limited to no more than three persons each to handle the distribution of paychecks.

The size and structure of the central Ministry also needs reexamination. Since 1984, the national economic situation has deteriorated and GOL funds for education have dropped dramatically. The education share of the national budget was 21 percent in 1985-86, 14 percent in 1986-87. Compounding the drop has been the decision of government not to disburse the full budgeted amount. In 1986-87, only salaries, gasoline and some subsidies were disbursed (see Chapter 2.0). During the time since 1984, enrollments appear to have dropped by approximately 25 percent and the school participation rate of school age children in first grade is estimated to have declined from 52 to 34 percent. Despite fewer students and less money, the number of teachers and administrators has grown.

The dilemma for education planners is that it is uncertain and perhaps unlikely that salary savings realized by retrenchment and staff realignment in the education sector would return to that sector. Savings due to adjustments in staff are not necessarily available for investment in more or better instructional materials, teacher training, or facilities repair. What may be good for the nation may not appear to be advantageous

for a particular sector. Serious reconsideration of staff size and configuration should be accompanied by a larger national consideration of the role and priority of education within the national development effort.

3.5.2 Internal Efficiency

Internal efficiency is related to whether a climate exists in which managers are able to perform effectively. At present, substantial problems are encountered by MOE staff with respect to both the procedures that guide their work and the incentive system under which they operate.

One constraint on internal efficiency is the evolution of a highly elaborated bureaucratic process in which functions are not always tied to intended outcomes. Serious inefficiencies result as even routine personnel actions take months to accomplish. One example is the process of appointing a teacher. The normal procedure requires 29 sign-offs by senior and mid-level civil servants across three Ministries and agencies (Figure 3.3). No simple method of tracking the documentation attached to this process exists. Consequently, if a new teacher resigns during the two to five months it takes to be put the teacher on the payroll, there is little chance that, should MOE be informed, action could be taken to halt the process. This results in "ghost" teachers on the payroll. If a teacher resigns in the middle of a year and the principal desires an immediate

Figure 3.3: Sign-off Stages for Placing a Teacher on the Government Payroll

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Stages 1-13: Ministry of Education

1. County Education Officer
2. Deputy Minister for Instruction
3. Assistant Minister for General Supervision
4. Deputy Minister for Administration
5. Assistant Minister for Administration (attaches approval memo)
6. Director for Personnel
7. Personnel Analyst (prepares Personnel Action Notice)
8. Finance D'rector
9. Assistant Minister for General Supervision
10. Assistant Minister for Administration
11. Deputy Minister for Administration
12. Minister of Education
13. Personnel Analyst (attaches diploma record form)

Stages 14-15: Civil Service Agency

14. Director of Records
15. Director General

Stages 16-19: Budget Bureau

16. Budget Analyst
17. Assistant Minister
18. Deputy Minister
19. Director of Budget

Stages 20-21: Civil Service Agency

20. Coding Analyst
21. Director General

Stages 22-25: Budget Bureau

22. Budget Analyst
23. Assistant Minister
24. Deputy Minister
25. Director of Budget

Stages 26-29: Ministry of Finance

26. Director General of Accounting
27. Chairman, Committee for Economic and Financial Management
28. Director for Data Processing
29. Computer Analyst (places teacher on payroll)

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replacement, the new teacher is still required to collect all 29 sign-offs.

Efforts to compensate for the overly elaborated bureaucracy sometimes create new and equally serious inefficiencies. For example, to compensate for the difficulties and delays in appointing a new teacher, the Ministry allows a replacement teacher to collect and cash the check of the teacher being replaced during the time the new teacher is trying to get on the official payroll. While the intent of the procedure is to ensure timely payment of replacement teachers, the procedure has had unintended consequences. First, the replacement teacher, even if less qualified, is paid at the level of the previous teacher, thus reducing the new teacher's incentive to correct the official record. Second, the linkage between qualifications and salary breaks down as replacements are at different qualification levels than those they replace. Third, since people can collect and cash checks made out to other individuals, there is no mechanism for determining if the individuals being paid really are teaching. A recent job analysis survey by the Civil Service Agency found evidence of widespread abuse and a prevalence of such "ghost" teachers.

While each step in the sequence of a decision and approval process may make sense, the cumulative impact produces a cumbersome process that results in a double-bind for the education system. Following the prescribed procedures results in teacher time away from professional activities, delays in

payment, and low teacher morale. Following more informal (but sometimes more effective) procedures to get something accomplished undercuts the legitimacy of the formal system and provides an incentive for corruption to the extent that officials accept payments to expedite the formal approval process. In either case, inefficient procedures undercut the effectiveness of the education system.

A second major constraint on internal efficiency is the incentive structure within which MOE staff and teachers function. Public sector employees have experienced a series of salary cuts and delays. In 1982 and 1983, salary for one month per year was withheld from all government employees for a mandatory savings bond program. At the end of 1983, an additional one month's salary was withheld as a contribution toward construction of the national radio station. At the end of 1984, all government employees received a salary cut of 5 to 16 2/3 percent, depending on salary level. And, in 1985, all government employees' salaries were cut again by 25 percent across the board.

In addition to salary cuts, there have been a series of delays in paying government salaries. In 1985, government salaries were not paid in July, August and September. Following a strike, teachers and MOE personnel received their October check in December and were not paid again until the end of February 1986, when they received their salary for November 1985. The salary disbursement schedule as it actually operated from 1985 through 1987 is presented in Chapter 4.0 (Table 4.11).

MOE employees' salaries can increase as they earn better credentials, but there are no steps in the salary scale for experience, merit, or increased cost of living. There is no mechanism for assessing employee performance or tying salary to such performance. Consequently, new recipients of a certificate level can earn as much as experienced personnel at that level.

The cuts and delays in monetary incentives pose two problems for managers in the education sector. First, MOE personnel are reluctant to make demands on teachers, principals, and other MOE staff who have not been paid. Delayed salaries inhibit the ability of MOE managers to elicit cooperation or enforce their directives. Secondly, it undermines the morale of the MOE managers themselves to the extent they feel they are not being rewarded adequately for their work.

While the lack of monetary incentives is a major constraint on the effectiveness of MOE management, the level and schedule of monetary incentives is largely outside the control of the MOE. However, the lack of monetary incentives can be partially offset by the effective use of non-monetary incentives. These might include preferential choice for subsequent assignments for teachers or staff who serve in particularly rural areas or regular rotation of teachers and staff for inservice training. At present, the MOE is unable to employ such incentives effectively since it does not have current information on teacher demand or an effective control of teacher assignment procedures; also, it has no easily accessible data on the training levels or

needs of staff from which a regular training schedule could be developed. The present weaknesses in managing non-monetary incentives compound the problems posed by the level of (and delays in) monetary incentives.

3.5.3 Additional Management Issues

Recent experience of the MOE highlights two additional management issues that deserve immediate attention--the ability of the Ministry to manage externally funded projects and to collect, analyze, and use educational data in decisionmaking. The issues affect both internal and external efficiency of the system. Both are crucial to the future ability of the Ministry to support the delivery of quality instruction in a timely and efficient manner.

3.5.3.1 Management of Externally Funded Projects

One of the most serious constraints on educational development in Liberia has been the problems encountered by the MOE in managing, coordinating, and institutionalizing externally funded projects. Since 1972, the education sector has received over $60 million in donor assistance. However, the cumulative impact of the money has been negligible. The problems are illustrated by (1) the supply, distribution, and cost problems encountered by the textbook project and the inability of the Ministry to maintain a viable revolving account to finance the textbook project; (2) the collapse of the MOE data system at the end of World Bank funding in 1984; (3) the lack of maintenance

for schools built under the World Bank projects, and loss of furniture and equipment in those schools to local community members; and (4) the ineffectiveness of the decentralized administrative structure developed with World Bank funds. In each case, factors outside the Ministry contributed to the problems. Nonetheless, the MOE was unable to develop adequate solutions and, ultimately, was perceived to have made things worse. The result has been wasted and poorly leveraged resources, an apparent decline in the size and quality of the education system, and a sharp drop in donor assistance to education.

For example, the World Bank Fourth Education Project and the USAID IEL Project contained substantial duplication of effort (described in Chapter 4.0). This resulted in confusion about the relative merits of apparently competing programs, a slowing of donor assistance for primary education when some donor groups insisted that the duplication be examined and reconciled, and the loss of resources to redundant activities in primary education that could have been used for more higher impact activities in that or other subsectors of the education system (Snyder and Nagel, 1986).

Given the decline in the Liberian economy since 1984, it is unlikely that the GOL will be able to provide substantial increases in the education share of the national budget. External donor assistance will continue to be needed to support education. The ability of the GOL to compete effectively for

these funds will require a clear and systematic effort on the part of the Ministry of Education to correct previous weaknesses in fiscal, information, and personnel management. Given recent donor experience, it is probable that the Ministry will have to demonstrate improved management capacity before substantial new funds will be made available. That opportunity is available to the MOE through the Primary Education Project, a topic discussed later in this chapter.

Present and future donor funding of education is constrained by four factors: (1) the absence of a clear long-term plan for education development in Liberia, (2) the lack of current education data to guide resource allocation decisions, (3) the absence of an effective project management and monitoring system that can help ensure that government and donor resources are well used, and (4) the overall economic decline of the country which has resulted in greater competition for resources from other sectors of the economy.

A strategy to reposition the MOE in competition for external funding will require four things. First, the development of an intermediate and long-term plan for educational development offers the MOE the mechanism with which to set priorities among competing needs and to direct donor attention to the issues identified as most important to the Ministry. At present, this is lacking; no systematic intermediate or long-term plan for education development has been developed since 1978. The plan should identify specific steps to address key constraints in

management, particularly in the areas of information and personnel management and instructional delivery.

A plan, by itself, does not improve education or management unless it is linked to a set of actions. It can serve, however, as a mechanism to organize resources and focus energies. An effective plan should include specific steps for implementation, clear indicators of progress, a process by which to monitor implementation and, most importantly, authority to ensure that resources are used in a manner consistent with the plan.

Second, the Ministry needs to revitalize its ability to collect, analyze, report, and use data in decisionmaking. Resource allocation decisions without information on student enrollments, teacher supply, instructional materials availability or costs lack credibility and undermine donor confidence. Further, such information is essential to donors who must justify their investment decision to their own constituencies.

Third, the MOE needs to design and implement a project monitoring and evaluation system to help identify unanticipated problems in project operation and detect impact (or lack of impact) early enough to allow meaningful interventions. Finally, the Ministry must demonstrate decisive action in resolving fiscal, management, and personnel problems once they are identified.

The MOE has an urgent need to demonstrate a capacity to manage externally funded projects. It also has an immediate opportunity with the PEP to demonstrate a renewed commitment to

effective management. If the Ministry is to be a credible contender for future donor assistance, it must ensure that the problems previously encountered in managing improvement projects do not occur in the present primary education project.

3.5.3.2 Information Management

The capacity to gather, analyze, report and use information about the education system has eroded seriously since 1984. Improved data collection and analysis was a priority activity under the Fourth World Bank project. Under that project, the MOE received a mainframe computer and three person years of technical assistance to develop forms and procedures for collecting, analyzing, and reporting data on enrollments, student flow, teacher supply and demand, facilities use and instructional materials availability. To help institutionalize the effort, the MOE created a new Information Service and Data Systems (ISDS) Division. During 1984, the MOE conducted a national education survey and from that developed a statistical profile of the education system. As soon as the external funding ended, the data system collapsed. In the three years since the 1984 survey, no systematic data collection has occurred; only one county (of thirteen) has reported complete data in any given year. Consequently, the Ministry has no current data on the number of students or teachers in the system, or the number of schools in operation. This lack of information is of particular concern given recent evidence that enrollment trends up to 1984 have

reversed and that there has been a recent sharp decline in the number of students in school, even as the number of teachers has been increasing.

The collapse of the data system in the Ministry is due to five factors. First, the introduction of a student registration fee created an incentive for schools to under-report enrollment so that some registration money could be retained at the school and district levels. Many schools and districts failed to provide any school level data. Second, the MOE mainframe computer (a VS80, 300MB) broke down in 1985, and the MOE has not been able to have it repaired under the existing service agreement. Third, data requests from major donors in the education sector dropped because USAID was between projects and the World Bank was reducing its involvement in the education sector. Fourth, because of traditional decisionmaking priorities, there was little internal MOE demand for quantitative data as a basis for decisionmaking. Also, with a severe drop in the MOE recurrent budget, there were few resource allocation decisions to be made. Combined with this was a pervasive belief that the school level data that was available could not be trusted, particularly since there were monetary incentives at the school level to under-report enrollments. Without either an external or internal constituency for the data, the information management effort that had been spearheaded by the World Bank collapsed.

The breakdown of the MOE mainframe computer in 1985 is not the primary reason for the collapse of the basic enrollment and teacher data system. The MOE has adequate microcomputer capacity to handle the analysis. Moreover, the education system is still small enough for the data to be handled adequately on a manual basis. The key problem was the lack of incentives (and the existence of overt disincentives) for schools and DEOs to report accurate data, the lack of effective MOE control over the activities of its decentralized administrative staff to ensure that data are sent to the MOE, and a decision process guided by criteria other than databased, systematic argument.

Three conditions have changed since 1985 that justify efforts to revitalize the data system--enrollment trends appear to have reversed, donor concern about the lack of data for decisionmaking is mounting at a time that the MOE increasingly needs to compete for external funds, and the MOE is beginning national implementation of a primary education project that will require substantial logistical support. Still, some of the same disincentives for data use remain and will need to be addressed before such a revitalization can succeed. As an initial step, the information management system should be designed to operate both manually or by computer. If by computer, it should be set up to operate on either a mainframe or a microcomputer.

3.5.4 Conclusions

In the present economic situation, the Ministry of Education cannot assume that new money will be available to support

education. Educational development will depend heavily on the wise management of existing resources. The weaknesses in management capacity that have been a recurring theme in previous assessments of the education sector continue. At the same time, the severity of the national economic situation may provide the opportunity as well as the reason to resolve these issues.

Based on the preceding analysis, recommendations are offered in four areas. These recommendations address the needs:

1) to manage school level finances in a way that could help enhance instructional quality at the school level;

2) to revitalize resource allocation, monitoring, and evaluation systems to help improve the management of GOL and externally funded projects;

3) to reorganize the MOE central and decentralized administrative staff to be more closely aligned to changes in the education system and the larger economy; and

4) to develop an education plan as a means of coordinating the various initiatives of the Ministry within a long-term view of the opportunities and constraints on education development.

3.6 Recommendations

Recommendation 1. Leave school registration fees at the school level for use in instructional improvement activities.

These funds should be under the control of a community council composed of community leaders, teachers and the school principal. Guidelines should be developed for appropriate uses of the money (e.g., the provision of instructional materials, supplies and facilities). These guidelines and the role of the

community council should be widely communicated to local communities through LRCN and the PEP network.

Previous criticisms of leaving registration funds at the community level have been that (1) principals divert the funds for personal use, (2) community members do not understand how schools function and are reluctant to exercise leadership, (3) consolidation of registration funds allows the MOE to negotiate bulk purchasing arrangements and get better prices for materials and supplies, and (4) the district, county, region, and central MOE need a portion of these funds to cover their own operating expenses.

These arguments no longer appear valid. The use of radio broadcasts directly to communities can help establish appropriate expectations and forms of participation in the management of funds. This community participation also can help curtail the possible misuse of funds by the principal. The bulk purchasing arrangements of the MOE is not a persuasive argument since the supplies seldom reach the schools. Finally, the use of student registration fees to fund the decentralized structure of the MOE is inappropriate since it reduces internal efficiency of the primary system when the activities it funds do not contribute to improved educational quality.

Recommendation 2. Improve the information management system within the Ministry of Education.

Improved educational data are necessary to resource allocation, project implementation, and planning decisions that face the MOE. At present, the MOE lacks effective means to collect, analyze, or use data. The collapse of the data system provided by the World Bank in the 1980s suggests that the failure to use data is not due to lack of collection or analysis capacity, but to a decision process guided by other criteria. The first step in improving the information system is to make decisions based on data rather than personal experience, political criteria, or ethnic ties.

Improvements to the education information system should be developed from a realistic assessment of what types of decisions can be based on objective criteria. A key component of the information management system should be to collect and analyze basic data on student flow, teacher supply and demand, and instructional materials availability and use.

Recommendation 3. Develop a teacher assignment system.

One key application of the information management system is to support a teacher tracking and assignment system. At present, the MOE has no systematic information on the number of teachers in the system, their qualifications, or their teaching assignment. This information is necessary in designing the nature and scope of inservice training, reallocating teachers to meet changing enrollment patterns, and costing and allocation of monetary and non-monetary incentives.

A first step in establishing a teacher assignment system is to improve the collection and analysis of information on student enrollment and teacher supply and demand. The information collected must be at a sufficient level of detail to support meaningful planning. For example, if data on teacher qualifications, ethnic background, or family ties would meaningfully constrain teacher assignment, this information must be included in the collection and analysis. To the degree that such factors constrain teacher mobility, teacher recruitment must be from areas where the teachers will be employed. These issues necessitate longer term planning than is currently the case in the Ministry, at a level specific enough to guide personnel and resource allocation decisions.

Recommendation 4. Discontinue the present system of decentralized MOE field staff.

The present system should be ended and current incumbents should be reassigned to other activities (as discussed in Chapter 5.0). Education Officers are unable to perform the functions they were originally intended to perform. At present, they operate primarily to collect money from the schools which then is used mostly to support the MOE administrative structure. Consequently, under the present system, resources flow from the schools to the Ministry, a resource loss that undercuts the quality of instruction in the schools without providing adequate compensating benefits in return. Proposed is a system that

reverses that flow (a) by leaving community resources at the school level, and (b) by directing additional resources (such as instructional materials and supervision under the PEP) from the MOE to the schools. The first step, as previously discussed, is to leave school fees at the community school level.

Recommendation 5. Reorganize the administrative structure of the Ministry of Education.

The size and structure of the Ministry of Education have not adjusted to the recent decline in the national economic situation, the loss of donor funds, or the apparent decline in school enrollments. In some areas of operation, administrative activities have become an end in themselves rather than a means of facilitating the quality of instruction. Many policies and procedures appear to serve little or no function in improving the delivery of quality instruction in schools; some directly reduce the efficiency and effectiveness of schooling. At the same time, basic systems for supporting resource allocation decisions and project management have not been implemented or were implemented inadequately and allowed to fail.

The planned reduction in public sector employees provides the Ministry with an opportunity to reexamine the current structure. The goal of such a review should be to align the size and structure with the changing conditions of the country and the education system.

One part of the reorganization might include a redefinition of the role and responsibilities of the senior staff. Its

present large size makes meaningful debate of policy issues difficult. A ministerial advisory group consisting of Deputy Ministers, Assistant Ministers, and the Controller might be more formally charged as the group responsible for policy debate. The senior staff meeting could then be used primarily for information sharing.

Recommendation 6. Institute a regular planning cycle in the MOE.

No systematic plan for intermediate and long-term educational planning has been developed since 1978. At present, the MOE lacks a clear plan for educational development that could serve (1) to guide choices among competing demands on resources, and (2) to indicate how different offices and functions should be related.

The present economic constraints facing government are expected to continue. Eventual improvement will come only as difficult choices are made among competing priorities, all of which may be important, but not all of which can be supported financially. The choices made will have long-term and far reaching consequences. Careful planning can help ensure that implications and consequences of alternative courses of action have been considered. Of particular importance is the development of a Five-Year Plan for educational development in Liberia.

This five-year plan also should be used to resolve continuing ambiguities among different offices and bureaus. For

example, clarification is needed between the responsibilities of the Bureaus of Primary Education and Teacher Education, the accountability structure of the decentralized MOE staff is unclear and contradictory, and there is evidence of substantial underemployment among Ministry staff.

Plans do not improve education unless they are linked to specific strategy, resources and commitments. Hence, the plan should identify specific steps that will be taken to address key constraints on development--particularly in the areas of information management, personnel management and instructional delivery, and administrative reorganization.

Recommendation 7. Develop a mechanism to ensure appropriate management of externally funded educational development projects.

Given present national economic constraints, the Ministry of Education continues to look to external funding to support educational development. The availability of these funds is constrained, in part, by a growing concern of donors about the Ministry's ability to manage development projects and by government's ability and willingness to sustain them at the conclusion of external funding. The collapse of the MOE data system, the problems encountered in implementing decentralized administration, and the deterioration of schools constructed with World Bank funds highlight donor concern over the viability of their investment in the education sector.

If the Ministry is to compete successfully for external funding, effective management systems will need to be developed

and management capacity demonstrated. The MOE has the opportunity to do this with the Primary Education Project. The cost of failure with PEP, in addition to the loss of educational quality, may be a further reluctance of donors to invest in education, as donors judge their funds to have been poorly leveraged when their initiatives are not sustained.

Donor coordination can be difficult, since the development agenda of donor agencies may differ from that of government due to political and economic factors beyond the control of the Ministry. One strategy for working with donors is to have a carefully specified development plan that identifies needs, underlying rationale, and priorities for development of the education sector. This would be a direct product of the implementation of Recommendation 6.

4.0 PRIMARY EDUCATION

4.1 Status

Only 34 of every 100 school age children in Liberia ever attend school. Of those 34, twenty-one enroll in a public primary school, six enroll in a mission sponsored school and seven enroll in other privately sponsored primary schools. Of the 34 starting primary school, only about 15 will persist to the sixth grade and, of those, approximately 14 students will enter junior high school (7th grade) the following year. Even though there is an increase in the number of school age children, school enrollments in Liberia are dropping, due to a series of economic, fiscal and managerial problems being encountered in the education sector.

4.1.1 National Goals and Strategies

One national goal of Liberia is that all children will receive at least 11 years of basic education. The compulsory education acts of 1912, 1937, 1955, 1959, and 1983 make education compulsory for all children between the ages of 6 and 16 for five hours a day, five days a week, for 180 days a year. While the GOL recognizes that achieving this goal is not yet a financially viable option, a series of intermediate goals have been established to help set priorities among national education efforts within the resources that are available.

Government goals for primary education are to improve the quality of instruction, to expand access in a way that addresses

regional and gender equity, and to enhance the administrative and supervisory capabilities of the Ministry of Education. These goals are stated in the First National Development Plan (1976) and the National Education Plan (1978-1990) and in the public presentations of GOL officials.

Several approaches will be used to reach these goals for primary education. Quality of instruction will be improved through programs to upgrade the teaching skills of underqualified teachers and to implement on a national scale a curriculum based on programmed teaching (grades 1-3) or programmed instructional materials (grades 4-6). While expanding access remains a goal, the Ministry of Education has no current plans to expand access at this time.

4.1.2 Structure

The primary school system consists of one to three years of preprimary followed by six years of primary education, all under the responsibility of the Ministry of Education. Primary schooling is available through public schools, mission-sponsored schools, concession schools (sponsored by large companies such as Firestone and Lamco), privately sponsored schools, and self-help (community sponsored) schools (Table 4.1). About 37 percent of the primary school places are privately managed by missions and other nongovernmental agencies operating under the authority of the Ministry of Education.

Preprimary education in Liberia provides a formal education program of one to three years duration for students who are too

Table 4.1

Primary School Enrollment by Gender and Level
Selected Years, 1970-1986

Type of School/Level		1970 Male	1970 Female	1970 Total	1978 Male	1978 Female	1978 Total	1981 Male	1981 Female	1981 Total	1984 Male	1984 Female	1984 Total
Mission	Preprimary	-	-	-	6,424	5,320	11,744	6,983	5,932	12,915	7,220	6,608	13,828
	Primary	-	-	-	14,733	10,461	25,194	14,924	11,776	26,700	14,980	12,122	27,102
Private	Preprimary	-	-	-							6,754	5,769	12,523
	Primary	-	-	-							10,191	7,349	17,540
Concession	Preprimary	-	-	Other	6,376	4,887	11,263	10,278	7,742	18,020	2,148	2,013	4,161
	Primary	-	-	-	11,668	7,439	19,107	15,279	8,958	24,237	4,818	3,708	8,526
Self-Help	Preprimary	-	-	-							1,375	895	2,270
	Primary	-	-	-							1,481	640	2,121
Non-Government Subtotal:	Preprimary	8,593	5,916	14,509	12,800	10,207	23,007	17,261	13,674	30,935	17,497	15,285	32,782
	Primary	17,293	9,482	26,775	26,401	17,900	44,301	30,203	20,734	50,937	31,470	23,819	55,289
Government	Preprimary	16,056	9,463	25,519	23,934	15,468	39,402	34,481	25,978	60,459	23,346	17,291	40,637
	Primary	38,988	14,454	53,442	56,789	28,686	85,475	67,688	36,541	104,229	58,934	33,224	92,158
Total:	Preprimary	24,649	15,379	40,028	36,734	25,675	62,409	51,742	39,652	91,394	40,843	32,576	73,419
	Primary	56,281	23,936	80,217	83,190	46,586	129,776	97,891	57,275	155,166	90,404	57,043	147,447
		80,930	39,315	120,245	119,924	72,261	192,175	149,633	96,927	246,560	131,247	89,619	220,866

Source: Snyder and Nagel. The Struggle Continues, IIR. January 1986.

Note: 1984 enrollment estimates vary from those reported in Table 4.1 by 939 students in Grades 1-6 due to confusion in the Ministry regarding the accurate enrollments for that year. Data in Table 4.1 are regarded as the most accurate estimates for purposes of this assessment, though there is no basis for verifying the accuracy of either data set.

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young for legal admission to primary school--that is, students under six years of age. In 1984, an estimated 97,783 enrolled in preprimary school compared to 36,704 enrolled that year in first grade. However, accurate data on the distribution of enrollments across the preprimary levels is not available. If it is assumed that 50 percent of the total preprimary enrollment is at the last (highest) level before first grade and that all students who go to first grade were in a preprimary program, then the progression rate from preprimary to first grade is over 90 percent.

Government partially supports the operating costs of the nonpublic schools through a subsidy scheme. However, the per-school amount of the subsidy has dropped both because of an increased number of schools competing for the funds and, more recently, a decline in the amount of Government funds available for the subsidy program.

Within the Ministry of Education, primary education is the administrative responsibility of the Assistant Minister for Primary Education, a position newly created in 1986.

4.1.3 Program

4.1.3.1 Students

Following a sharp increase in primary school enrollments during the 1970s and the early 1980s, there has been a decline in enrollments since 1982 (Table 4.2). Between 1982 and 1986 public elementary school enrollment dropped 27 percent (from

Table 4.2

Distribution of Public Elementary School Students
by Level in Liberia by Year
(1980-1986)

YEAR LEVEL	1980	1981	1982	1983	1984	1985*	1986*
1	23,591	29,067	30,008	26,197	23,000	20,193	17,729
2	17,767	21,144	22,413	21,483	17,798	17,710	15,549
3	15,185	17,710	18,773	18,484	10,793	16,196	16,116
4	12,490	14,383	15,246	15,119	13,867	9,174	13,767
5	10,523	12,060	12,784	12,582	11,019	10,955	7,247
6	8,826	9,865	10,457	10,817	9,680	9,697	9,640
Total:	88,382	104,229	109,681	104,682	91,597	83,925	80,048

Source: Division of I.S.D.S. Ministry of Education

* 1985 and 1986 enrollments were estimated from 1984 data using the progression rates reported in Table 4.4. First grade enrollment estimates assume the percentage enrollment drop between 1983 and 1984 will continue.

109,681 to 80,048 students). This decline in public primary school enrollments is projected to continue into 1990 when enrollments are expected to increase slowly to around 90,000 students by 1993. Table 4.3 reports 1984 enrollment estimates by grade, gender, and region based on the national education survey conducted in that year. No systematic collection of student enrollment, teacher supply or facilities use has been undertaken since 1984.

The increasing enrollment (up to 1982) was due to (1) a government sponsored expansion of the education system combined with school construction financed by the World Bank, both of which extended access to areas previously unserved or underserved, (2) a government subsidy program to private and mission schools, and (3) widespread parental perception of the value of education for their children. The apparent enrollment decline since 1982 has been due to a convergence of three factors. During 1984-85 Liberia suffered severe economic problems, government and some businesses were unable to meet payrolls on a regular basis and, consequently, many parents were unable to afford school fees. At the same time and in response to the same economic problems, the MOE doubled the primary school registration fee from $2.50 to $5.00 per student per year in order to offset a declining GOL allocation to education, thus accentuating the economic pressures on parents. Third, teachers experienced a series of pay cuts and pay delays, leading many to seek supplemental employment that reduced their school time and,

Table 4.3

Primary School Enrollment by Type of School, Grade, County and Gender (1984 Data)

Type of School	Government																
Grade	Pre		Pre	1		2		3		4		5		6		1-6	%
Enrollments	M	F	Total	M	F	M	F	M	F	M	F	M	F	M	F	Total	Female
Region/County																	
Southwestern																	
Basa	3899	1090	4989	857	566	602	304	485	255	486	237	423	187	363	138	4903	.34
Bomi	1353	704	2057	405	276	328	227	330	205	258	122	234	91	192	62	2730	.36
Cape Mount	629	551	1180	387	245	276	148	233	114	200	60	149	57	129	55	2053	.33
Margibi	1284	863	2147	559	287	437	201	415	212	380	194	134	153	307	144	3423	.35
Montserrado	9288	3117	12405	2811	2406	2357	1931	2253	1789	2042	1560	1858	1216	1829	1032	23084	.43
Rivercress	545	318	863	221	121	162	49	122	34	87	27	59	13	72	23	990	.27
Subtotal	16998	6643	23641	5240	3901	4162	2860	3838	2609	3453	2200	2857	1717	2892	1454	37183	.40
North-Central																	
Bong	2104	1432	3536	1306	746	1021	469	854	399	802	285	637	250	574	200	7543	.31
Lofa	3360	2004	5364	1847	915	1610	719	1421	513	1134	349	937	234	771	162	10612	.27
Nimba	3135	2801	5936	1860	1546	1687	1226	1562	1151	1443	796	1086	588	929	401	14275	.40
Subtotal	8599	6237	14836	5013	3207	4318	2414	3837	2063	3379	1430	2660	1072	2274	763	32430	.34
South-Eastern																	
Grand Gedeh	2032	1022	3054	993	707	773	548	705	460	635	364	599	285	487	206	6762	.38
Grand Kru	1453	858	2311	576	250	460	171	463	164	426	144	417	129	346	75	3621	.26
Maryland	1685	1445	3130	1057	710	708	464	763	466	669	346	510	234	482	169	6598	.37
Sinoe	1525	1061	2586	920	426	615	305	586	279	593	228	409	130	427	85	5003	.29
Subtotal	6695	4386	11081	3546	2093	2556	1488	2517	1369	2323	1082	1935	778	1742	555	21984	.34
Grand Total	32292	17266	49558	13799	9201	11036	6762	10192	6041	9155	4712	7452	3567	6908	2772	91597	.36

Table 4.3, continued

Primary School Enrollment by Type of School, Grade, County and Gender (1984 Data)

Type of School	Other Pre		Pre	1		2		3		4		5		6		1-6	%
Grade Enrollments	M	F	Total	M	F	M	F	M	F	M	F	M	F	M	F	Total	Female
Region/County																	
Southwestern																	
Basa	207	191	398	156	95	199	66	105	52	63	24	45	23	20	15	863	.32
Bomi	67	86	153	98	90	73	33	89	41	50	15	63	16	43	4	615	.32
Cape Mount	115	61	176	226	151	189	166	134	106	112	65	122	66	67	38	1442	.41
Margibi	726	753	1479	756	409	473	274	646	203	375	186	419	121	263	114	4239	.31
Montserrado	2611	2476	5087	1075	1026	862	796	746	715	636	524	446	378	378	305	7887	.47
Rivercress	48	35	83	41	25	30	10	30	7	25	6	16	4	4	2	200	.27
Subtotal	3774	3602	7376	2352	1796	1826	1345	1750	1124	1261	820	1111	608	775	478	15246	.40
North-Central																	
Bong	968	814	1782	673	708	595	721	506	432	430	386	286	313	241	275	5566	.51
Lofa	796	427	1223	456	236	352	165	312	120	211	96	196	80	172	37	2433	.30
Nimba	752	617	1369	430	379	316	260	254	190	243	183	238	162	208	127	2990	.44
Subtotal	2516	1858	4374	1559	1323	1263	1146	1072	742	884	665	720	555	621	439	10989	.44
South-Eastern																	
Grand Gedeh	54	37	91	118	73	129	44	44	38	20	12	12	6	2	3	501	.35
Grand Kru	104	45	149	28	7	21	6	19	8	10	7	8	4	13	5	136	.27
Maryland	92	0	92	71	67	72	48	55	42	46	18	54	23	42	21	579	.41
Sinoe	0	0	0	110	48	93	32	82	27	47	16	35	6	17	3	516	.26
Subtotal	250	82	332	327	215	315	130	200	115	123	53	109	39	74	74	1774	.35
Grand Total	6540	5542	12082	4238	3334	3404	2621	3022	1981	2268	1538	1940	1202	1470	991	28609	.42
Countrywide	58806	37977	96783	21403	15301	17239	11635	15801	10025	13798	8060	11511	6318	10234	5183	146508	.39

Table 4.3, continued

Primary School Enrollment by Type of School, Grade, County and Gender (1984 Data)

Type of School	Mission																
Grade	Pre		Pre	1		2		3		4		5		6		1-6	%
Enrollments	M	F	Total	M	F	M	F	M	F	M	F	M	F	M	F	Total	Female
Region/County																	
Southwestern																	
Basa	985	904	1889	354	275	246	210	233	155	176	147	181	161	135	103	2376	.44
Bomi	282	266	548	125	117	110	98	99	68	96	71	83	69	74	52	1062	.45
Cape Mount	260	241	501	107	78	67	62	42	57	65	35	49	30	38	29	659	.44
Margibi	303	279	582	202	135	154	118	182	84	221	102	134	70	87	84	1573	.38
Montserrado	2724	2778	5502	1032	941	907	792	722	724	618	600	507	492	502	487	8324	.48
Rivercress	126	78	204	56	32	37	24	49	22	37	20	18	9	19	14	337	.36
Subtotal	4680	4546	9226	1876	1578	1521	1304	1327	1110	1213	975	972	831	855	769	14331	.46
North-Central																	
Bong	2104	1432	3536	180	162	185	112	189	96	148	110	135	91	145	83	1636	.40
Lofa	3360	2004	5364	195	161	183	124	185	95	159	119	169	95	155	83	1723	.39
Nimba	3135	2801	5936	429	325	370	258	320	313	392	263	396	255	363	250	3934	.42
Subtotal	8599	6237	14836	804	648	738	494	694	504	699	492	700	441	663	416	7293	.41
South-Eastern																	
Grand Gedeh	2032	1022	3054	345	226	216	165	213	125	189	112	191	114	127	85	2108	.39
Grand Kru	1453	858	2311	87	68	77	66	85	60	77	53	74	33	55	33	768	.41
Maryland	1685	1445	3130	155	162	179	158	169	138	128	114	110	82	94	80	1569	.47
Sinoe	1525	1061	2586	99	84	68	65	99	66	69	64	72	48	62	37	833	.44
Subtotal	6695	4386	11081	686	540	540	454	566	389	463	343	447	277	338	235	5278	.42
Grand Total	19974	15169	35143	3366	2766	2799	2252	2587	2003	2375	1810	2119	1549	1856	1420	26902	.44

consequently, the quality of the instruction available to students. Part of the enrollment decline reflects the increased opportunity cost of sending children to school. Many parents appear to believe that the value of sending their child to a public school no longer exceeds the school fees plus the value of the child's contribution to the family by staying at home.

However, these estimates are difficult to interpret since enrollment data may be inaccurate. Educators report that some of the apparent decline in enrollments is due to underreporting of enrollments at the school or district level to mask the retention of some funds collected as student registration fees at those levels. These retained funds are used by the schools to purchase instructional materials and supplies no longer provided by the Ministry. Some reports suggest some of the money is diverted for personal use of school or district level personnel. As registration fees are diverted to other uses, enrollments are adjusted to reconcile with the amount of money remitted to the MOE. Accurate estimates of the enrollment changes since 1984 are hampered by the unavailability of complete enrollment data for the 1985-1987 school years, an issue that will be addressed later in this chapter.

Table 4.4 reports progression rates based on 1983-84 enrollment data. Student progression rates are relatively high, ranging from .77 to .91 depending on grade and type of school. The progression rates above 1.00 between grades six and seven in mission and other private schools reflect a combination of

Table 4.4

Progression Rates based on 1983-84 Enrollment Data
by Type of School

	Progression Rates			
	Public	Mission	Other	Total
Pre-1	.46	.17	.63	.38
1-2	.77	.82	.80	.79
2-3	.91	.91	.83	.89
3-4	.85	.91	.77	.85
4-5	.79	.88	.77	.81
5-6	.88	.89	.88	.88
6-7	.77	1.09	1.62	.91
7-8	.87	.84	.84	.85
8-9	1.01	.95	.82	.94
9-10	.57	1.02	.67	.70
10-11	.92	1.00	.79	.92
11-12	1.18	1.12	1.18	1.16

repetition and crossover of public school students to private schools. This crossover may reflect a parental belief that obtaining enrollment for their child in a better junior high school improves the child's later probability of getting access to senior high school. Progression rates above 1.00 at the ninth and twelfth grade indicates repetition when students fail the national examinations given in those two years.

Table 4.5 presents student flow through the primary grades adjusted for grade repetition. Since no national data is available on students' repetition, the 1987 repetition rates reported by the Monrovia Consolidated School System (MCSS) were used in computing national student flow statistics, based on 1984 national enrollments (the last year for which systematic enrollment data is available). MCSS repetition rates are probably lower than the national rates, making present estimates of cycle cost conservative. Of the 34 of every 100 children who start first grade, nine graduate in six years and five graduate in seven years. Overall, government financed 11 student years in the elementary cycle for every student graduated in six years. Given the low quality of instruction in conventional primary schools, it is unlikely that early dropouts have acquired or will retain economically valuable skills (literacy, numeracy). Repetition and dropout, then, represent a substantial wastage of both student time and government resources.

4.1.3.2 Teachers

In 1985 the MOE reported a total of 666 instructional and administrative staff at the preprimary level and 4,470 at the primary level (Table 4.6). Of those at the primary level, 73 percent had only a high school education or less and are regarded by the Ministry as unqualified. While no data is available on the current qualification level of teachers, evidence suggests there has been a further decline since 1985. The output from the teacher training institutes has dropped from 205 to 69 graduates between 1984 and 1986, a decline of 73 percent. Of those graduating from the Kakata Rural Teacher Training Institute (KRTTI) in 1986, approximately 40 percent were denied a "C" level certificate because they never received (or did not provide proper documentation of having received) a high school diploma (see Chapter 6.0). Further, the cuts and delays in teacher salary payments has discouraged qualified entrants to teaching. People with marketable skills in other areas generally leave (or never enter) teaching. While no data are available on teacher attrition, some Ministry officials believe it may be as high as 20-30 percent annually, particularly among the more qualified teachers. One indirect indicator of attrition is teacher mobility--22 percent of the first 755 teachers trained in the IEL program have requested transfers to other schools or have left education. As turnover occurs, some of the benefits of the large scale inservice training conducted under the World Bank and PEP projects are lost to primary education. Private schools

Table 4.5

Student Progression and Repetition

Year	Grade 1	2	3	4	5	6	
1	34						
2	4	27					
3		4	24				
4			4	20			
5				4	16		
6					4	14	9
7						5	5

Eleven student years in the elementary cycle are financed for every student graduated in six years.

Notes:

1. Table assumes 34 of each 100 school age children start first grade.

2. Since no national grade repetition data is available, 1987 repetition rates for the Monrovia Consolidated School System were applied to the national data. This yields a conservative estimate of cycle cost.

Table 4.6

Instructional Staff* Distribution
By Level and Qualification
MOE, 1985

QUALIFICATION	INSTRUCTIONAL LEVEL PRE-PRIMARY	ELEMENTARY	JR. HIGH	SR. HIGH	UNKNOWN	TOTAL
Below High School	208	646	63	24	98	1,039
High School	381	2,637	822	233	432	4,505
Cert. "C"	21	613	233	19	24	910
Cert. "B"	26	296	341	46	20	729
Cert. "A"	4	33	54	65	3	159
Voc.	0	0	2	4	0	6
Cert.	7	108	115	107	40	377
Diploma	2	25	35	48	20	130
Two Years College	5	17	20	25	5	72
B.A./B.Sc.	11	90	149	436	93	779
M.A./M.Sc.	1	5	15	74	35	130
Ph.D./Ed.D.	0	0	0	1	1	2
Total:	666	4,470	1,849	1,082	771	8,838

* this Table includes only school teachers, principals and vice principals.

Source: Ministry of Education, 1985.

generally have a higher percentage of qualified teachers since they offer better incentives and are more consistent in applying minimum standards in hiring.

While the 1984 teacher:student ratio was 1:35, the 1987 ratio is estimated at 1:28 in government schools and 1:25 in non-government schools. The reduction reflects a decline in student enrollment without a corresponding reduction in the number of teachers. Indeed, the number of teachers appears to have grown by nine percent during a time that enrollments fell by about 24 percent. These statistics seriously underrepresent the reality of the classroom situation, since many of the teachers are not actively engaged in teaching and because evidence indicates student enrollments may be underreported. Further, class size varies dramatically by location. A 1986 study of the Monrovia Consolidated School District indicated that the teacher:student ratio averages 1:37. However, it ranged from 1:95 to 1:27 across the twenty elementary schools in the city. Conditions in rural areas generally are less favorable due to the lower level of resources available to rural schools and teacher reports of classes of 50 students are not uncommon.

Data are not available on teacher:student ratios in private schools, but enrollments in those schools has been increasing, suggesting that the teacher:student ratio may have increased. However, private school educators suggest that those schools are more aggressive about limiting enrollment to levels that do not threaten instructional quality.

Table 4.7

Education Employee Status
Primary, Secondary Schools and
Ministry of Education
1984

COUNTY/ OFFICE	GOVT/ NON-GVT	ADMINISTRATIVE/ TECHNICAL STAFF	INSTRUCTIONAL STAFF	SUPPORTING STAFF	TOTAL
MOE Main Office					
	Govt	270	49	370	689
	Non-Govt	-	-	-	-
Bassa					
	Govt	13	393	36	442
	Non-Govt	1	323	12	336
Cape Mount					
	Govt	6	193	48	247
	Non-Govt	4	132	22	158
Montserrado					
	Govt	88	1,846	371	2,305
	Non-Govt	36	1,886	132	2,054
Bong					
	Govt	19	452	46	517
	Non-Govt	1	154	2	157
Lofa					
	Govt	7	556	15	578
	Non-Govt	1	234	3	238
Nimba					
	Govt	24	722	93	839
	Non-Govt	8	375	9	392
Grand Gedeh					
	Govt	22	351	47	420
	Non-Govt	2	112	1	115
Maryland					
	Govt	15	628	47	690
	Non-Govt	3	167	6	176
Sinoe					
	Govt	9	463	39	511
	Non-Govt	3	161	8	172
Sub-Total:					
	Govt	473	5,653	1,112	7,238
	Non-Govt	59	3,544	193	3,798
Grand Total:		532	9,197	1,307	11,036

Source: Ministry of Education, 1984

Noninstructional staff represent about 30 percent of the total staff in government schools, seven percent in non-government schools (Table 4.7). This suggests considerable inefficiency in school level management in the government schools and an area in which improved management capacity might result in financial savings.

4.1.3.3 Curriculum and Materials

The national curriculum for primary education is formulated as a series of generalized goal statements but does not specify how or what material is to be taught. The MOE provides a list of recommended books for each subject at each grade which is intended to apply to both public and private schools. However, no mechanism for monitoring compliance exists. Books are not widely available to students in rural areas and it is a common practice for teachers to sell copies of their notes as a source of supplemental personal income.

The World Bank Textbook Project tried to address the shortage of instructional materials but generally was unsuccessful due to a series of management problems. A total of 667,273 textbooks were ordered and delivered to the MOE. At the end of 1986, only about 40 percent of these textbooks had been sold and, of those, four of every five sold were in the Monrovia area. The texts that were sold are most likely to be found in private schools (IEES, 1986).

The IEL Project has been the most direct effort to specify the primary school curriculum. IEL developed and employed a

combination of programmed teaching (grades 1-3) and programmed learning materials (grades 4-6) to instruct students in five areas: reading, English, mathematics, science and social science. The IEL materials operationalize the primary school curriculum by providing clear learning objectives and structured classroom activities which help ensure that a large amount of time is dedicated to academic learning tasks. IEL is particularly appropriate for use by underqualified teachers since it shifts much of the responsibility for structuring instructional time from the teacher to the materials. Teachers also appear to learn content and teaching methodology from using the materials and, over time, become less dependent on the materials. Evaluations of the program have indicated that IEL students demonstrated higher achievement and retention. Some evidence also suggests higher enrollment demand in IEL schools as parents learned about the program.

Following the study on integration of textbook and programmed instructional approaches (IEES, 1986), the MOE accepted a modified version of the IEL as the national primary school curriculum and developed a phased plan for national implementation under a USAID funded Primary Education Project (PEP).

The PEP is a competency-based learning system that emphasizes the use of existing IEL programmed teaching in grades 1-3. Grades 4-6 will use programmed materials combined with regular textbooks. In grades 5-6 there will be an increase in

the number of teacher directed classes, more out of class assignments and more textbooks available for students.

4.1.3.4 Examinations

Since the early 1970s, when use of a Primary School Leavers Examination was discontinued for financial reasons, student progress has been based on classroom examinations and monitored at the national level by the administration of standardized exams at the end of ninth and twelfth grades. Students, however, must pass an entrance examination to be admitted to junior high school. These tests are developed by faculty committees within each school and are intended to assess student knowledge of language arts, mathematics, science and social science and are administered and scored at the school level. The data on pass rates generally is not recorded in the school since it is not collected by the MOE.

Within the primary grades, student progress is monitored by the individual teacher through intermittent quizzes and tests administered at the end of each six week period. While progression rates through the primary grades are relatively high they are not automatic. Annual progression from grade to grade is dependent on a student achieving a passing cumulative score on the six week examinations in each of the four subject areas. Students are not promoted if they fail more than one subject area; they can be conditionally promoted if they fail only one subject area.

Since these tests are developed by each teacher, there is no consistency across schools in content coverage or any information on the psychometric quality of the exams. Further, there are widespread reports of student grades being changed in response to inducements or pressure from the student or parents.

4.1.3.5 Facilities and Equipment

From 1970-1984 the number of schools increased by 69 percent, from 1084 to 1830 schools. Government-managed elementary schools accounted for 54 percent of all primary schools in 1970, 67 percent in 1981, and declined to 63 percent in 1984. One reason for the increase was that expansion of primary school places was a goal of both the Second and Fourth World Bank Education Projects. Across both projects 33 primary schools and 43 community schools (which eventually became regular primary schools) were constructed and 30 existing schools were furnished, repaired or enlarged.

While GOL was the major source of system expansion up to 1980, nongovernmental sources have been the major contributors since then. Since 1985, GOL has not had funding for school construction and no new government schools have been built.

School facilities are inadequate and poorly furnished and equipped. In 1982, it was reported that only 40 percent of the enrollment was housed in adequate structures, many facilities needed repairs, and there were insufficient funds for maintenance (African Development Fund, 1982). The study found that of the 28,000 primary school students in a single county, only 35

percent of the students had chairs and only 14 percent had tables or desks. Since 1984 the situation has deteriorated as the MOE has been unable to provide funds for school maintenance or furnishings.

Many school buildings are used for multiple sessions to extend access within the limitations of the present facilities. For example, in 1982, most of the primary schools in Monrovia were used for two day sessions and one night session, most primary schools in county seats were used for two sessions per day; rural schools generally served all nearby students with a single session. While no current data is available, the pressure on school facilities may have decreased as enrollments have declined; however, this easing of pressure is probably offset by the deterioration in school facilities due to the apparent lack of maintenance.

4.1.3.6 Costs and Donor Support

Improving the primary school curriculum, teacher training, and administration has been a primary focus of all major donors in the education sector in the last twenty years. The major donors have been World Bank, African Development Bank, and USAID. In addition, Germany, Japan, the EEC and UNICEF have sponsored smaller projects that have included attention to primary education.

Between 1972 and 1987, the World Bank (WB) and the African Development Bank (ADB) have provided over US $50 million to

Liberia in education loans, encompassing six major development projects in the education sector. Due to the default of GOL in repayment of earlier World Bank loans, the World Bank suspended its program in Liberia and closed its Monrovia office in October 1987.

The goals of these Bank projects were to improve both educational quality and access and to help meet national manpower requirements in support of general economic development. The major activities within those projects included curriculum reform, materials production and distribution, preservice and in-service staff training and school construction to expand access. Across the four World Bank financed projects, the greatest commitment of funds (21 percent of the total) has been at the primary level. These funds were for the construction of community and primary schools, textbooks, and inservice teacher training. Primary education represented an even larger share of the two ADB loans--81 percent of the total. Most of the ADB funds were committed to school construction.

Since 1972, Liberia has had four World Bank sponsored education projects (summarized in Table 4.8). In the Second and Fourth Bank Education Projects, primary education received the largest share of funds of any education subsector.

The Second Education Project (US $1,308,800) was directed primarily to extending access, particularly to rural poor, and addressing inequality through school construction. Specifically, funds were made available for the construction of 50 primary

Table 4.8

Subsector Foci of World Bank Education Project Investments*
(in 1972 Real US$ thousands)

	World Bank 1		World Bank 2		World Bank 3		World Bank 4		Total	
	$	%	$	%	$	%	$	%	$	%
Primary	225.0	2.9	1,308.8	39.1	--	--	4,919.1	46.5	6,452.9	24.0
Secondary	3,575.0	46.9	--	--	1,767.2	33.5	--	--	5,342,2	19.9
Tertiary	2,536.0	33.2	530.5	15.8	225.6	4.3	454.3	4.3	3,746.4	14.0
Vocational/ Technical	235.0	3.1	323.4	9.7	2,839.7	53.8	2,063.9	19.5	5,462.0	20.4
Educational Administration	1,058.0	13.9	1,186.3	35.4	447.0	8.5	3,136.4	29.7	5,827.7	21.7
Total	7,629.0	100.0	3,349.0	100.0	5,279.5	100.0	10,573.7	100.0	26,831.2	100.0

* Primary includes funding for Community Schools, Primary Schools, Textbooks, and In-Service Teacher Training.
Secondary includes funding for Science and Technology Centers and Multilateral High Schools
Tertiary includes funding for University of Liberia (COAF, TTC, UPU), KRTTI, and ZRTTI
Vocational/Technical includes funding for FTI, LSVTC, Tubman High, MVTC, AITB, CBDTC, and Adult Education
Educational Administration incudes funding for all MOE Units and Divisions, LOPA, MPEA, and WAEC

Source: Snyder and Nagle (1986) The Struggle Continues, McLean Virginia: Institute for International Research, pg. 111.

schools, expansion and improvement of the Zorzor Rural Teacher Training Institute, and some fellowships for foreign study for primary teacher training.

The Fourth World Bank Education Project shifted emphasis from expanding access to enhancing education quality. Funding emphasis shifted from facilities construction to program development support. A total of US $4,919,100 was earmarked for primary education, focusing on textbook procurement/distribution, teacher training, and straightening of the MOE's supervisory capacity.

The primary education component of the Fourth Education Project (WB4 and ADB2) allocated $5,798,000 for the construction, equipping and furnishing of 24 new primary schools and for equipping of 30 existing primary schools. In addition, $2,857,000 was provided for the purchase and distribution of textbooks and the establishment of a revolving textbook account to replenish future supplies from revenues obtained from textbook sales. Another $1,200,000 was committed to a large scale program of teacher training to support the introduction of the textbooks.

The ADB financed two projects, the first for US $4.3 million initiated in 1976 and the second for US $9.8 started in 1982. These loans largely supported and extended World Bank priorities and project administration of the ADB and World Bank education programs was consolidated in a single Project Implementation Unit. Most of the funds were directed towards extending primary school access through school construction.

AID has been a major donor in primary education through direct support of the Improved Efficiency of Learning (IEL) project (1978-1985), the Primary Education Project (1986-1992), the PVO/NGO Support Project (1987-1992) which will provide support to private schools, and a variety of smaller grants through the PL480 program to support particular institutions or programs (e.g., WAEC, Cuttington College, etc.). In addition, AID funded programs in other sectors have impacted on the education sector--for example, under the PEP the Liberian Rural Communication Network will be used for inservice teacher education. The Commodities Import Program will be used to fund severance payments to MOE personnel as part of a general reduction in the size of the civil service. In addition to AID funding, primary schools receive assistance from the Peace Corp. Peace Corp volunteers serve both as primary school teachers and, under the PEP, as instructional supervisors.

4.1.3.7 Quality of Instruction

The quality of instruction in Liberian public schools has been low, due to a lack of instructional materials, the absence of clear instructional objectives, the high proportion of under-qualified and unqualified teachers, and the high frequency of teacher absences. The worsening national economic situation since 1984 has contributed to a further decline in instructional quality as some private schools have closed in response to the cutback in government subsidies and as families are less able to afford necessary textbooks and instructional materials.

Private schools are widely believed to offer higher quality education than public schools. They are generally better financed through higher tuition and, in the case of mission schools, through external support. They tend to have better and more available instructional materials (than public schools), because the materials are provided by the school and/or students are from families better able to afford the materials. There generally is more and better supervision of teachers which results in more regular teacher attendance. This, in turn, results in more direct instructional time for private school students.

No national system has existed for monitoring instructional quality since 1973 when the Primary School Leavers Examination was discontinued. Most teachers have no training in test construction and teacher made tests are of unknown quality and are not consistent across schools. Consequently, the MOE has no systematic way to identify geographical areas characterized by particularly low instructional quality, though national examination results at higher grades indicate such geographical discrepancies in educational quality exist (see Chapter 5.0).

One of the most promising developments in Liberian primary education is the design and successful pilot testing of the IEL learning system. Results of the evaluation comparing student achievement in the first 15 IEL schools with conventional schools and conventional schools supplemented with World Bank textbooks indicated a modest advantage for the IEL students (Kelly, 1984;

Boothroyd and Chapman, 1987). The national implementation of a modified version of the IEL learning system under the PEP offers a possibility to improve instructional quality at the primary level, but only if the conditions that contributed to the success of the pilot can be retained and reinforced. This issue will be discussed later in section 4.2.4.2.

4.2 Analysis

4.2.1 Needs

The major needs of primary education are for improved teacher incentives and a stronger management capacity, particularly in the areas of personnel and information management. There also is a need for planning to ensure that the current national initiatives in primary education are implemented and managed in a way that ensures the programs can be sustained by the MOE after the external funding ends.

4.2.2 Plans

The MOE has identified primary education as the priority subsector for development over the next five years. Current plans are to implement nationally a modified version of the IEL learning system and to conduct inservice teacher training to support that effort. Plans are to use the broadcast facilities of LRCN to support this inservice teacher education under funds already available through the PEP.

4.2.3 Opportunities and Constraints

The Ministry of Education has five major advantages as it plans for development of primary education. It has a well designed primary curriculum of demonstrated effectiveness which has already been implemented in 158 schools and which has already been accepted as the national curriculum. Second, an inservice teacher training program in support of the PEP has been designed and successfully implemented on a pilot basis. Third, the leadership in the Ministry of Education, overall, has more formal training for their respective positions than is true in some other countries at a similar stage of development. Fourth, there is evidence of a continuing parental interest in and demand for education, if that education is of adequate quality. This demand is evidenced by the increased parent demand for primary schooling in the IEL pilot schools, and in the steadily increasing preprimary enrollments over the last five years. Fifth, the Liberian Rural Communications Network (LRCN) has been completed and its broadcast facilities are fully operational, though its programming to date has concentrated on nonformal education, public service and entertainment. Broadcast time is available that could be used to support inservice teacher education, community education about the new curriculum and, eventually, direct student instruction. Donor monies to support development of the interactive radio for inservice teacher education is already available through the PEP. These opportunities can only be realized if a set of key constraints can be overcome.

The major constraints under which primary education operates are inadequate teacher incentives, poor teacher quality, the lack of instructional materials, weak or nonexistent systems for instructional supervision, a lack of planning and management data, and lack of communications between schools and the ministry. Lack of adequate or appropriate teacher incentives is the single largest constraint on the effectiveness of the primary system. Current teacher pay and assignment practices induce low teacher morale, low motivation, and high absenteeism. The teaching force is seriously underqualified and incentives for upgrading are weak and poorly managed.

The next most serious constraint on primary education is the lack of management capacity at both the school and Ministry level. This is manifest in the lack of data for planning and management of primary education, the lack of communications between schools and the Ministry, and in poor utilization of donor funding and lack of donor coordination. Although an excellent core of trained personnel exists in the Ministry and related institutions, there is a serious need for improved management capacity if these skills are to be used effectively.

4.2.4 Issues

4.2.4.1 External Efficiency

The decline in participation rate and the low quality of instruction in public schools both contribute to an extremely low level of external efficiency of the primary education system.

Only 15 out of every 100 Liberian children can expect to finish six grades and, for the nine of those attending public school, the instruction they receive may not be adequate preparation for entry into the modern sector of the economy.

While no data is available about the retention of basic literacy and numeracy skills among children who do not continue to junior high school, retention is likely to be low, given the poor quality of instruction in conventional public schools. This loss of external efficiency has a serious negative impact on the larger development needs of the nation, since literacy has been demonstrated to be an important factor in rural health, agricultural, and economic development efforts.

Flow rates from preprimary to first grade are unclear since the distribution of students by preprimary level is unknown. The three levels of preprimary (ABCs, Primer 1 and Primer 2) occur, in part, because some parents use preprimary schooling as a form of day care. While this may fulfill an important role in the community, it represents an additional burden within the education system. First grade enrollment as a percentage of preprimary enrollment is lowest in Mission schools (29%), highest at government and other private schools (46%) (Table 4.9).

Preprimary education has been controversial. Both the World Bank assessment report associated with the Fourth Education Project and the 1983 USAID sponsored EHR Sector Assessment recommended ending the program. Both reports argued that the cost of the program outweighs the educational benefits to the

Table 4.9

Pre-Primary and Primary School Enrollments
by Gender and Type of School
(1984 Enrollment Data)

Grade	Public		Mission		Other		Grand	
	Total	% Girls	Total	% Girls	Total	% Girls	Total	% Girls
Total Pre-Elementary	49558	.35	35143	.43	12082	.46	96783	.39
Elementary								
1	23000	.40	6132	.45	7572	.44	36704	.42
2	17798	.39	5051	.45	6025	.44	28874	.40
3	16233	.37	4590	.44	5003	.40	25826	.39
4	13867	.34	4185	.43	3838	.41	21890	.37
5	11019	.32	3668	.42	2952	.44	17639	.36
6	9680	.29	3276	.43	2587	.45	15543	.34
Total Elementary (1-6)	91597	.36	26902	.44	27977	.42	146476	.39

children. Parents, however, have continued to demand preprimary education, presumably from a belief that it provides their children with a comparative advantage (or at least avoids a disadvantage) in later schooling.

The idea for preprimary education was to help prepare non-English speaking students to enter primary school in which English was the language of instruction. However, the grade has become a holding area for students, lasting up to three years for some. Once promoted to first grade, many repeated the same learning experiences, wasting resources. Efforts have been made to reduce the prolonged pregrade stage, but there is resistance to dropping the program altogether.

The program is believed by many parents to operate as a readiness and enrichment program, but its effectiveness in that role is probably minimal since there is no formal curriculum or instructional materials and most teachers have no qualifications or training to teach at this level. Nonetheless, given parent demand for the program and the resilience of the program despite efforts to reduce it, a more useful approach might be to continue official support for the program within a long-term strategy of linking it more closely to the primary curriculum, providing this could be done at no additional cost to GOL.

National implementation of the PEP offers an opportunity to develop this linkage as instructional materials and a more clearly articulated first grade curriculum become available in the schools. A long-term goal of the Ministry should be to

reduce preprimary to one year and to use it to emphasize specific readiness skills (English, number recognition, etc.) for first grade identified through an analysis of the first grade curriculum. Materials suggesting preprimary readiness activities could be distributed with the PEP materials and through the LRCN broadcasts.

A second issue of external efficiency concerns the eventual impact of the primary education curriculum on the flow of students from primary to secondary education. The PEP is expected to result in higher primary enrollments and better academic preparation of students than is now the case. Within five years this could result in new pressures on junior high schools to accommodate additional students and to offer higher quality instruction than at present. While these are positive pressures, planning must begin now to ensure that the secondary system will be prepared to meet them. This planning should be part of a larger national education plan so that the issues addressed are understood within the larger strategy of educational development.

Until national implementation of PEP is achieved, junior high schools may draw from catchment areas that will span PEP and non-PEP schools, since the new primary program is being implemented by school rather than by grade level. Hence, students may enter seventh grade with more diversity both in the quality of their prior preparation and in the teaching approaches they have experienced. These differences may pose additional

instructional pressures on the teachers. These issues need to be addressed through appropriate strategy to prepare and support junior high school teachers.

4.2.4.2 Internal Efficiency

The primary education system has severe problems of internal efficiency, most of which result from the lack of teacher incentives and the low level of management capacity within the Ministry.

The major constraint on internal efficiency is the lack of teacher incentives due to a series of reductions and delays in salary payments over the last three years and the logistical difficulties for teachers in picking up and cashing their paychecks. The lack and delay of incentives results in a loss of teacher motivation and increased absenteeism as teachers allocate school time to other income producing activities. A 1984 study found the daily teacher absence rate to be about 22 percent. The cuts and delays in salaries since then may have had a further negative effect of teacher attendance. The lack of adequate and regular monetary incentives is so severe that it is unlikely that public primary education can be meaningfully improved until these problems are resolved by government. These problems are largely outside the control of the Ministry of Education, since salary levels and payments are handled by the Ministry of Finance. Nonetheless, failure to resolve these issues, particularly the regularization of salary payments, may impair effective implementation of the Primary Education Project. The cost of

failure, in addition to the loss of immediate educational quality, may be a further reduction in donor funding as donors judge their funds to have been poorly leveraged.

Of the factors more directly under the control of the MOE, the major constraint on internal efficiency of primary education is the lack of management capacity. The problem has been manifest in the lack of effective supervision of the schools and by the lack of information to support resource allocation, planning and program implementation decisions. These issues are addressed in section 4.2.4.4 of this chapter as they affect primary education and in Chapter 3.0 as they affect the entire education sector.

Low instructional quality has been a major factor in internal inefficiency. Contributing to the low quality has been the (a) lack of instructional materials in the schools, (b) the high rate of unqualified teachers and (c) the lack of any mechanism to monitor student performance across schools as a basis for targeting special interventions to schools or districts that have consistent or excessively low levels of student performance.

All three of these issues are addressed in the new Primary Education Project (PEP) which is now being implemented nationally. The PEP is the most promising development in the education sector. If successful, it will go a long way toward improving both the internal and external efficiency of primary education. It provides a well defined curriculum, instructional

materials of demonstrated effectiveness, and an inservice program to support the introduction of those materials. While the pilot program has been successful, rapid expansion of the program raises new issues. The conditions of success of a pilot project often are difficult to replicate as a project goes to full scale implementation. It is further complicated in the case of the PEP because the demonstrated achievement gains of IEL students over students in conventional schools were statistically significant but not large. A study of students in grades three, four and five indicated that, 'on average across all three grades, students in the IEL program scored 13.5 percent higher than students in the comparison groups on the mathematics achievement test used in the external evaluation; 5.5 percent higher than comparison groups on the English achievement test (Boothroyd and Chapman, 1987). If the PEP is not effectively implemented, these achievement gains may not be replicated.

Improved internal efficiency in the primary sector depends heavily on the success of the PEP. One of the more important internal efficiency issues facing the MOE, then, is to coordinate resources and activities to help ensure the success of PEP, its national implementation, and its continuation after external funding ends. To do this, the Ministry must address three factors: First, full national implementation will include a higher percentage of remote schools and unqualified teachers than encountered in the pilot stage. Consequently, the logistics of teacher training, materials distribution and supervision will be

more complex. While PEP has built in strategies for materials distribution and instructional supervision, those strategies do not employ the existing reporting structures (DEO to CEO to REO) of the Ministry because those structures are widely recognized to be ineffective. If the Ministry is to institutionalize the PEP, it must give strong support to the instructional supervision system of the PEP even though it may conflict with the existing administrative reporting system. This support will necessitate (1) clarifying the roles of the DEOs, CEOs, and REOs, (2) formally defining the role of these administrators so that their activities do not harm PEP implementation, and (3) insuring that school administrators and instructional supervisors have the necessary training to perform their tasks under the PEP. Alternative roles for the district, county and regional administrators are discussed in Chapters 3.0 and 5.0.

Second, though the PEP program relies heavily on instructional materials to guide the sequence and pacing of instruction, there is evidence that the PEP curriculum is more demanding on the teachers' time and energy than the conventional Liberian curriculum. Successful PEP implementation requires that teachers maintain more regular attendance and commit more time to instructional activities than was often the case under the conventional curriculum. Teachers may view the PEP as more demanding and as a threat to their opportunities to hold supplemental employment. Successful implementation of PEP will depend on appropriate incentives being available to the PEP

teachers. At minimum, this will require that regular teacher salaries be paid on a timely basis. To the extent that PEP does reduce teachers' time for supplemental income opportunities, the Ministry will need to provide other monetary or nonmonetary incentives to compensate for foregone income.

The PEP has built-in incentives for teachers in the form of inservice training, improved content expertise, increased instructional materials for classroom use, and increased status in the community as parents recognize the improved quality of instruction available to their children. Whether these non-monetary incentives can sustain teachers' motivation over the long-term without concurrent improvements in monetary rewards is unclear.

Third, the Ministry needs to rebuild its information management capacity as a basis for planning and coordinating teacher training, materials distribution, instructional supervision, and evaluation activities that will be essential to sustaining PEP, particularly after external funding ends. One of the most important functions of an improved information system is personnel management.

Current problems being experienced by the MOE in personnel management and teacher assignment have particular impact on the internal efficiency of primary education. The Ministry of Education accounts for approximately 25 percent of all civil service employees. The number of teachers and administrators has increased since 1984 by an estimated nine percent--during a time

that enrollments have declined. While Ministry officials cite the low participation rate as evidence of the need for more teachers, there is no evidence that the increasing number of teachers is addressing that problem. Indeed, it appears that student participation is dropping even as the teaching force is being expanded. A key issue is that the Ministry has little if any control over teacher assignment, in part because it has no current information on teacher supply or demand in the primary system and in part because the decentralized system of instructional supervision (DEOs, CEOs and REOs) has not worked, an issue discussed in section 4.2.4.4 and Chapter 3.0. The consequence, however, is that this uncontrolled growth of the teaching force places financial stress on the Ministry without improving the quality of primary education.

As a first step in establishing a teacher assignment system, the Ministry needs to improve the collection and analysis of information on student enrollment and teacher supply and demand. The information collected must be at a sufficient level of detail to support meaningful planning. For example, if data on teacher qualifications, ethnic background, or family ties would meaningfully constrain teacher assignment, this information must be included in the collection and analysis. To the degree that such factors constrain teacher mobility, teacher recruitment must be from areas where the teachers will be employed. These issues necessitate longer-term planning than is currently the case in the Ministry, at a level specific enough to guide personnel and

resource allocation decisions. The need for an education information management system is discussed in Chapter 3.0.

The lack of a common test at any point during primary schooling leaves the Ministry with no systematic mechanism to monitor student performance or instructional quality at the primary level. Since these tests are developed by each teacher, there is no consistency across schools in content coverage or any check on the validity or reliability of the tests as a basis for measuring student performance. Moreover, many teachers are unqualified or underqualified and have no training in test development or interpretation. While RTTI students receive some instruction in test construction and student assessment, the preparation is more suited for test interpretation than test development. Consequently, student promotion is not based on the amount learned; grade progression is virtually automatic. Better mechanisms for assessing student performance are important, but of a lower priority than improving the instruction.

One further constraint on internal efficiency has been the difficulties of communication among the Ministry, schools and parents. Until recently there has been no effective way directly to inform parents, many of whom are illiterate, about new programs or to encourage parent and community support for primary education. The successful implementation of the Liberian Rural Communication Network (LRCN) offers a mechanism to communicate directly with parents. Use of radio might improve internal efficiency in three ways. First, information about the new

primary education program can be shared with parents as a means of encouraging them to enroll their children. Second, PEP instruction differs from conventional instruction in ways that have concerned some parents. For example, students in the lower grades do not have homework; they use their instructional material only at school. Radio can help parents understand the new program and suggest ways in which they can support the educational process. Third, radio can suggest ways that monies collected at the local level can be used most effectively to support improved instructional quality. This point is discussed further in Section 4.2.4.5 and in Chapter 2.0.

4.2.4.3 Access and Equity

While some progress was made between 1978 and 1984 in expanding access to primary schooling with the construction of rural primary schools under the Fourth World Bank Education Project, access has declined since then. The education system is losing ground--though the school age population is increasing, the actual number of students in primary school is decreasing. While 52 percent of primary school age students were enrolled in school in 1983, enrollment had dropped to 34 percent by 1986. Two-thirds of the school age population have no access to primary education.

Fewer girls than boys attend primary school throughout the country. In 1984, girls accounted for only 35 percent of primary enrollments, down from 39 percent in 1981. While entering school

at a lower rate, attrition among female students in public schools is higher. An analysis of 1984 female enrollment by grade shows a gradual decline in female enrollment between grade one (40%) and grade six (29%) (Table 4.10). The consistency of overall female enrollments since the early 1980s in combination with the declining female enrollment by grade indicates that, contrary to an initial impression that government schools are doing better at attracting female enrollment, they are probably attracting females at about the same rate each year and are having more trouble than other types of schools in retaining them.

The quality of instruction differs substantially by geographical location in the country. Educators report that rural schools are less likely than urban schools to have qualified teachers, textbooks, and instructional materials. Measurable evidence of these inequities emerges later in the examination pass rates at the ninth and twelfth grades which differ dramatically by county (see Chapter 5.0) with the lowest pass rates in rural areas.

4.2.4.4 Administration and Supervision

The successful development and piloting of the IEL bears evidence of the Ministry's capacity to manage a complex project. At the same time, issues of administration, management and supervision remain central to continued development of primary education. The major administrative issues that confront the MOE are the lack of data to guide resource allocation, planning,

Table 4.10

Female Enrollment as a Percentage of Total Enrollment by Grade, 1984

Type of School	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 1-6 Overall
Goverment	.40	.39	.37	.34	.32	.29	.36
Mission	.45	.45	.44	.43	.42	.43	.44
Other	.46	.44	.40	.40	.38	.40	.39
All schools - 1984							.39
All schools - 1981							.39
All schools - 1978							.36

monitoring, and evaluation of existing programs, the lack of communication between the MOE and the schools, the poor management of donor funding, and the lack of donor coordination. The major issue in supervision concerns the need to train principals in instructional supervision as a means of supporting implementation of the PEP.

All major assessments of the MOE in the last 20 years have identified the weak management capacity of the MOE as a major constraint on educational development, and Chapter 3.0 of this assessment offers the same conclusion. At present, primary education may be the subsector most influenced by the continued weaknesses in this area. Within primary education, the weaknesses in management have been manifest in the lack of effective supervision of the schools and the lack of information to support planning and monitor implementation of educational programs.

Five factors contribute to the management incapacity. These include the lack of incentives for school and ministry employees to perform their jobs, the lack of effective systems to manage government and donor funds, the lack of personnel trained for the positions they hold, the lack of intermediate or long-term planning that identifies development priorities in the education sector, and the lack of clarity in job descriptions of educational administrators at all levels of the education system.

The problems encountered by the MOE in managing donor funding have occurred largely in primary education, since primary

has been the focus of the major donors in the last 20 years. As described earlier, the Fourth World Bank Education Project addressed curriculum improvement through a large textbook program and an inservice teacher training program. At the same time, AID undertook a pilot program that involved the development and use of programmed teaching (grades 1-3) and programmed instructional materials (grades 4-8). Based on positive evaluation results indicating improved student achievement of IEL students, the IEL program is to be implemented nationally with continued support from USAID through the Primary Education Project (begun 1988).

The World Bank Textbook Project encountered a series of problems during implementation and was suspended in 1985. A 1984 consultant report identified the problems as general lack of money, given Liberia's stagnant economy; the relatively high price for the textbooks for the average parent; lack of general awareness of the textbook scheme; late and ineffective publicity, and late arrival of the books. In addition, discrepancies between book sales and the amount of money from those sales returned to the revolving fund which was to have financed purchase of additional texts resulted in loss of financial viability of the program.

Responsibility for the poor coordination of donor efforts must be shared by the MOE, the donors, and the contractor who was implementing both projects. Nonetheless, the most direct negative consequences accrued to the Ministry as funds were

poorly leveraged and poorly managed. The apparent conflict between these programs eventually was resolved through a study, commissioned by the Minister of Education, which recommended a strategy for integrating the World Bank and USAID sponsored programs. The experience of these projects highlights the need for stronger financial management of donor funds in the Ministry and the need for more clearly articulated priorities for donor assistance. The most immediate implication of this history is the need to ensure that the problems previously encountered in managing improvement projects in primary education do not occur in the present primary education project.

One risk in a high visibility project, such as the PEP, is the perception on the part of decisionmakers that the key issues in primary education are now addressed adequately and that future government and external assistance can be directed to other priority areas. This could result in inadequate attention to more subtle but equally important aspects of project administration and planning that arise during implementation and a lack of attention to the longer-term issues of sustaining the program after external resources end. In light of the recent history of problems in managing and sustaining funded projects in primary education, particular attention should be given to ensuring that the introduction of the new primary instructional system and the related teacher training is implemented and managed in a manner that can be continued by the MOE beyond the donor assistance. Given the success of the IEL and the

importance of successful implementation of the PEP, the MOE should consider the national implementation of the new primary school curriculum as the priority activity within the education sector and coordinate available donor funding to support its national implementation.

One factor contributing to the weak management of primary education has been the limited effectiveness of the decentralized administrative staff of the MOE. The decentralized system of district, county and regional administrators was designed in the 1970s to address the lack of communications between the Ministry and the schools. The DEOs were intended to provide both instructional supervision at the primary level, for which they report directly to the Assistant Minister for Primary Education, and administration, for which they report to the CEO. This decentralization has been unsuccessful and has contributed to an overall decline in the effectiveness of primary education, not because decentralization was an inappropriate goal, but because the particular strategy employed was not fully developed. The Ministry decentralized responsibility without decentralizing either authority or financing. Second, the decentralized structure had no provision for meaningful accountability of district, county and regional personnel to the central Ministry.

District, county and regional administration has suffered from a lack of operating budget, lack of transportation to visit schools, lack of appropriate training to perform the intended supervisory and administrative functions, and ambiguity and

confusion over job descriptions, responsibilities and reporting structures. Contributing to the problem is that the appointment of some education officers was based on political rather than professional criteria which has undermined efforts to introduce systems of accountability. The added layer of administration resulted in increased financial costs to the schools and the MOE without a resulting improvement in instructional supervision, information flow, or education quality. The problems decentralization poses for educational supervision are discussed in greater detail in Chapter 3.0. However, the ineffectiveness of the current system confusion potentially has serious consequences for implementation of the PEP and is of particular concern in planning for primary education.

Under the PEP, Instructional Supervisors (who have supervised classrooms during the IEL) in conjunction with Peace Corp Volunteer teacher advisors will provide intensive instructional supervision for one year after each new school joins the program. After that, school principals will assume that supervisory role. The frequent school visits of the Instructional Supervisors under PEP offer a route for improved communication between schools and the MOE. At the same time, it raises the potential for conflict with MOE district and county administrators as this improved communication may expose school, district, and county practices that the MOE would not condone. For example, to the extent school enrollments are underreported to avoid the accurate accounting of school fees, or unauthorized

fees are collected at one of the administrative levels, the instructional supervision system of the PEP may come in conflict with the existing administrative structures. It is important that the MOE exercise strong leadership to ensure that the occurrence of such conflict is minimized and, when it does occur, is dealt with at once. Chapter 5.0 discusses new roles the DEOs CEOs, and REOs might play that would reduce potential conflict with PEP while serving to strengthen educational quality at the secondary level.

Principals are scheduled to receive one week of instructional supervision training and one year of intermittent on-the-job supervisory training in addition to inservice training in teaching PEP. Given the limited educational preparation of many principals, this level of training may not be adequate to prepare them to sustain supervision on their own. Continued external supervisory visits may be necessary to facilitate communication among PEP schools about strategies and ideas for teaching the materials, to offer verification of principals' judgments about teachers' competencies, and to provide positive reinforcement to the principal and teachers.

4.2.4.5 Costs and Financing

In response to the worsening financial situation of GOL, the costs to primary school students have increased dramatically over the last three years. In 1984, primary school tuition was

increased from $2.50 to $5.00 per student per year. In addition students must purchase their own books, school uniforms ($14 if purchased new in a store), and pay an assortment of activity and materials fees, depending on the school. Since the MOE has been unable to provide operating funds to schools, students are subject to an additional series of fees and charges for materials and services provided by the school. In rural areas, students increasingly must pay extra for any paper or official form (such as a report card) required by the school. For example, students must pay a "paper charge" for quizzes and tests they must take in order to be promoted. Educators offer the following price schedule:

$.10-.25	for a quiz
.25	for a test at the end of a six-week period
.50	for a major examination
$1.50-3.00	for class handout (since books are not widely available)

The total private cost to attend a public primary school is estimated at $38. These per-students costs have made primary schooling prohibitively expensive for many families, since family size in Liberia averages six to seven children. This escalation of costs has contributed to the 24 percent drop in estimated public primary school enrollment. Even with the drop in registration fee to $3.00 for students in rural areas for the 1988 school year, many parents cannot afford public education for their children.

The estimated total cost for private primary school is $300-$800. This includes between $50-$300 per semester in tuition depending on the school, plus the cost of uniforms and instructional materials. Some nongovernment schools have systems for reducing tuition for children of church members, for multiple children from the same family attending the school, or for students whose families are unable to pay. Despite the substantially higher cost, most private primary schools report increasing enrollments and recently some private schools have begun placing caps on their enrollment to avoid overtaxing their facilities. Private school administrators note that many of the students enrolled are not members of the church or denomination sponsoring the school, but enroll from a belief that the quality of the education is superior to that available in public schools. A more detailed discussion of primary school costs is provided in Chapter 2.0.

Primary school teachers' salaries, along with other government employees, have sustained a series of salary cuts since 1980. In 1982 and 1983 salary for one month per year was withheld from all government employees for a mandatory savings bond program. At the end of 1983, an additional one month's salary was withheld as a contribution toward construction of the National radio station. At the end of 1984, all government employees received a salary cut of 5-16 2/3 percent, depending on salary level. And, in 1985 all government employees salaries were again cut by 25 percent across the board. In addition to

salary cuts, there have been a series of delays in paying government salaries. In 1985, teachers were not paid in July, August and September. Following a strike, teachers received their October check in December and were not paid again until the end of February 1986, when they received their salary for November 1985. The salary disbursement schedule as it actually operated from 1985 through 1987 is presented in Table 4.11. These delays have hurt morale and imposed an additional economic penalty on teachers, especially in rural areas, who have had to buy goods and services from local merchants on credit, often at exorbitant interests rates. Private school teacher salaries are comparable or sometimes slightly higher than public school teachers' salaries and generally they are paid on time.

Teacher salary can increase as a teacher obtains higher credentials, but there are no steps in the salary scale for experience, merit, or increased cost of living. There is no mechanism for assessing teacher performance or tying salary to such performance. Consequently, new recipients of a certificate level can earn as much as an experienced teacher at that level.

Teacher salaries are supposed to be related to teacher qualifications. In actual practice there is little correspondence between qualifications and salary, since teachers sometimes are paid at the level of the teachers they replace, may not receive increments for which they are eligible, or may continue to be paid even after they cease teaching. While formal procedures for getting teachers on the payroll are highly

Table 4.11

Schedule of Teacher Salary Disbursements
1985-1987

Month	Year	Date of Disbursement
July	1985	Oct. 3, 1985
August		Oct. 11, 1985
September		Oct. 18, 1985
October		Dec. 11, 1985
November		Jan. 21, 1986
December		March 21, 1986
January	1986	April 4, 1986
February		May 22, 1986
March		June 4, 1986
April		June 22, 1986
May		July 15, 1986
June		Aug. 6, 1986
July		Oct. 6, 1986
August		Nov. 11, 1986
September		Nov. 14, 1986
October		Dec. 16, 1986
November		Jan. 13, 1987
December		March 11, 1987
January	1987	April 4, 1987
February		April 22, 1987
March		June 12, 1987
April		July 17, 1987
May		July 18, 1987
June		July 28, 1987
July		Aug. 3, 1987
August		Sept. 28, 1987
September		Nov. 4, 1987
October		Nov. 24, 1987
November		Dec. 11, 1987
December		Jan. 8, 1988

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elaborated, no effective system is available for monitoring salaries for those teachers once they are employed. The situation is complicated by the use of teaching appointments as a form of patronage--one of the more effective since a teaching position is one of the few government jobs that can be awarded in rural areas.

Neither initial teacher salaries nor subsequent increments for equivalent positions are determined on a consistently applied basis. Since remuneration is not related to performance, supervisors have no salary-related incentives for stimulating quality performance. The lack of regular pay results in loss of influence for the principal or instructional supervisor who is reluctant to insist teachers meet their classes and attend workshops when they have not been paid.

Public primary schools have not had operating or maintenance budgets from the MOE since 1984. The $5.00 registration fee collected from each student is supposed to be sent to the central MOE to be used to purchase materials and supplies, but educators report that some of the money is diverted to personal use by MOE officials at the school, district and county level. The money that is remitted to the central MOE generally does not return since education supplies seldom are provided back to the schools.

Government expenditures in education have been eased through the efforts of private schools, which now account for about 40 percent of all primary school enrollment. The government encouraged these private investments with a subsidy program

designed to expand access, particularly in the interior, while still retaining some government leverage and control of private school activities by granting funds to cover part of the recurrent operational costs. The subsidy program grew from US $60,000 in 1949 to US $4 million in 1979, to over US $5 million in 1983.

During the 1970s, management of the subsidy program was criticized. No clear rationale existed for the amount of funds received by individual schools and some schools received subsidy amounts in excess of the proportional government level of support at fully public schools. Over the last five years the per-school subsidy has dropped (see Chapter 2.0). As the nonpublic system expanded, more schools were competing for the same amount of total money. For example, the 1984/85 per-school subsidy dropped to about 80 percent of the 1983/84 subsidy solely because of the increase in the number of eligible schools (Modu, 1984). Further, faced with increasing economic constraints, GOL reduced the total subsidy available, further cutting amount available per school. Three consequences have resulted. First, some evidence exists that the drop in government subsidy to nongovernmental schools resulted in a drop in the quality of instruction offered in the private schools. Second, the costs no longer subsidized by the government are passed on to the parents and local community, resulting in a drop in student enrollment in some schools. Some mission groups report the loss of government subsidies forced the closing of some primary schools. Third,

some of the primary school enrollment previously absorbed by the nongovernment schools shifted to the government schools, contributing to an increased demand for public primary education.

4.2.5 Conclusions

Four conclusions emerge from the above analysis of constraints and issues. These conclusions then form the basis for nine recommendations.

Conclusion 1. The improvement of educational quality should precede further expansion of the primary education system.

The quality of the instructional process is determined by (or determines) the external and internal efficiency of schools and provides the context within which the issues of management capacity and of cost and financing must be considered. While the participation rate of school age children in primary education appears to be declining, this issue cannot be addressed effectively until the quality of the education that is available is improved. The primary education subsector is well positioned to respond to this challenge through implementation of the PEP.

Conclusion 2. Successful implementation and eventual institutionalization of the Primary Education Project deserves priority over all other areas of concern regarding primary education.

The primary subsector has the curriculum, materials, training, and funding for the PEP. Still, the successes of a

pilot project often are difficult to replicate as a project goes to full scale implementation. Rapid national implementation will raise new issues of training, supervision, communications, logistical support, and project monitoring, not all of which are adequately provided for in the current MOE planning or in the external funding of the project.

The difficult financial circumstances of the education sector will result in continued intense competition for both government and donor resources. The level of external support already committed to the PEP might allow some to assume that other priorities within education should now be addressed. However, the Ministry of Education should concentrate its own resources in the PEP until that effort is firmly established and is able to operate without external funding.

Conclusion 3. Improved management capacity of the Ministry of Education is essential to further development of primary education.

In particular, the MOE needs to improve its management of information and personnel. Better information on the education system will not itself improve education quality, but is prerequisite to meaningful resource allocation, planning, project implementation and project monitoring. Similarly, without information on teacher supply and demand or an effective system of teacher assignment, the increased size of the teaching force does little to improve educational quality or access, and may actually lower quality if teacher salaries are diverting funds

that would be better used for instructional materials, supplies, and maintenance.

Conclusion 4. Improved teacher incentives is a precondition for sustaining long-term improvements in the education system.

While salary level and payment schedules are not under the control of the MOE, improvement in these areas is necessary to sustaining successful developments of primary education. Teachers have sustained a series of salary cuts and delays in payment that have undercut teacher morale and effectiveness and contributed to teacher attrition. At minimum, salary payments should be paid on a regular schedule. While the PEP offers a series of nonmonetary incentives for teachers, it is unclear they are adequate to sustain implementation on a national scale and it is unlikely they will be sufficient to sustain the program after external funding ends.

4.3 Recommendations

Recommendation 1. The Ministry of Education should concentrate government and donor resources on primary education to help ensure success in implementing and sustaining the PEP.

National implementation of PEP requires logistical and managerial support related to resource allocation, formative evaluation, supervision, and project monitoring at a level for which the MOE is not yet fully prepared. A continued concentration of resources will be necessary to the success of

the new primary instructional system. While the short-term purpose of this concentration is to support the PEP, the long-term benefits of improved capacity in primary education can benefit all education subsectors. The concentration of resources on a well defined program can enhance the probability of PEP success which, in turn, can provide the experience, management structure, and incentive needed for educational improvements in other subsectors.

Recommendation 2. Implement a systematic formative evaluation of the delivery and instructional effectiveness of the Primary Education Project at the classroom level.

This formative evaluation should address two issues. First, it would examine the manner in which instruction actually is delivered by the classroom teacher. Findings would be used to strengthen or modify the inservice teacher training and instructional supervision provided by the PEP. Second, it would assist in planning for the teacher training and curriculum design to support the eventual entrance of PEP graduates into secondary schools.

Recommendation 3. Expand the inservice training of principals as instructional supervisors.

Under the PEP, external instructional supervision is provided for one year, after which school principals are expected to assume that responsibility. At present, only one week of in-service training in instructional supervision and on-the-job

training during the year of external supervision is provided. More instructional supervision training is needed if the PEP is to be sustained at the conclusion of external funding, for two reasons. First, instructional supervision incorrectly done can be harmful as teachers are reinforced in wrong teaching behaviors. Second, on-the-job training is not as systematic since the training often depends on the specific events of the day.

Instructional supervision training for principals should be increased to a four-week training of principals who have previously been trained in the PEP teaching method. The content should be based, in large part, on the information gained from the formative evaluation of problems new PEP teachers actually experience (Recommendation 2, above).

Recommendation 4. Leave school registration fees at the school level for use in instructional improvement activities.

These funds should be under the control of a community council composed of local leaders and the school principal. Guidelines should be developed for appropriate uses of the money--aimed at instructional materials, supplies and facilities. These guidelines and the role of the community council should be widely communicated to local communities through LRCN and the PEP network.

Previous criticisms of leaving registration funds at the community level have been that (1) principals divert the funds for personal use, (2) community members do not understand the

functioning of school and are reluctant to exercise leadership, (3) consolidation of registration funds allows the MOE to negotiate bulk purchasing arrangements and get better prices for materials and supplies, and (4) the district, county, region, and central MOE need a portion of these funds to cover their own operating expenses.

These arguments no longer appear valid. The use of direct radio broadcasts to communities can help establish appropriate community expectations and forms of participation in the management of these funds. This community participation also can help curtail the possible misuse of funds by the principal. The bulk purchasing arrangements of the MOE is not a persuasive argument since the supplies seldom reach the schools. Finally, the use of student registration fees to fund the decentralized structure of the MOE is inappropriate since it reduces internal efficiency of the primary system when the activities it funds do not contribute to improved educational quality.

Recommendation 5. Expand the use of radio to support the decentralization of school financing.

The broadcast facility of LRCN offers a unique means to reach local community leaders directly with information on guidelines for how student registration fees should be collected and used at the local level. Radio provides one inexpensive way of assisting community members to monitor the financial and educational practices of their local schools by providing

suggestions for how monies could be used and indicators of effective use.

Recommendation 6. Continue and regularize the program of subsidies to private schools.

A more systematic basis should be used for awarding subsidies in an effort to reduce the influence of political and personal criteria in determining subsidy amounts. Specific attention should be given to reducing the apparently disproportionate share of the total subsidy amount to a small number of schools historically favored by the program.

If appropriately administered, the subsidy program offers a highly leveraged use of funds, and it encourages private funds to help cover the cost of educating children who would otherwise be in public schools or go without education. However, the effectiveness of the program is lost if subsidy levels to private schools are higher than the cost of educating the students at a similar quality level in a public school.

Recommendation 7. Implement an information management system to support resource allocation, project monitoring, and planning decisions associated with implementing and sustaining the new primary curriculum.

Improved educational data is a necessary input to resource allocation, project implementation and planning decisions that now face the MOE, many of which are in primary education. It is of special significance to primary education, since basic

enrollment, student flow, and staffing data will be needed to implement and sustain implementation of PEP. At present, the MOE lacks effective means to collect, analyze or use such data. The collapse of the data system provided by the World Bank in the 1980s suggests that the failure to use data is not due to lack of collection or analysis capacity, but to a decision process guided by other criteria. The first step in improving the information system is to develop decision systems that are based on data rather than personal experience, political criteria, or ethnic ties. Improvements to the education information system should be developed from a realistic assessment of what types of decisions can be based on objective criteria.

Recommendation 8. Develop a National Education Plan that details MOE intermediate and long-term strategy for sustaining the PEP after external funding ends.

No systematic plan for intermediate and long-term educational planning has been developed since 1978. At present, the MOE lacks a clear plan for educational development that could serve (1) to guide choices among competing demands on resources and (2) to indicate how different offices and functions should be related. Plans do not improve education unless the plans are linked to specific strategy, resources and commitments. The plan should identify specific steps that will be taken to address key constraints on development--particularly in the areas of information management, personnel management and instructional delivery.

Recommendation 9. Consolidate primary schools in selected areas.

Location of new primary schools sometimes has occurred for political rather than educational reasons. The possible consolidation of small schools offers financial savings to the community. It also provides primary school teachers with the support of a larger reference group of other teachers and makes the delivery of instructional materials and supervision easier. As a first step, the MOE should sponsor a school mapping study of geographical areas known to have a large number of primary schools. While the school mapping study would need to be sensitive to geographical, cultural and ethnic barriers, sufficient educational and financial advantages exist to warrant this effort.

5.0 SECONDARY EDUCATION

5.1 Status

Out of every 100 Liberian children, 14 will begin the seventh grade, ten will progress to the ninth grade, and eight will move on to twelfth grade. Of the eight seniors, two will graduate within 12 years. A total of six percent of all students who start first grade will graduate from high school.

Current economic conditions faced by GOL dictate that priorities be established among and within each sector. Within education, the decision has been made to concentrate initially on strengthening primary education. Until primary schools are improved, the secondary school system by necessity will receive less attention. It is within this context that the assessment of the secondary schools has been undertaken. Recommendations for change reflect the assumption that the funding available for secondary education will not increase in the near future.

5.1.1 National Goals and Strategies

The National Education Plan 1978-1990 listed three major goals for secondary education:

1. to improve the quality of instruction, and make the curriculum more relevant to the socioeconomic conditions of the country;
2. to provide the student with greater opportunities and exposure to the world of work; and
3. to increase the number of adequate facilities.

At the junior high level, schools are expected to (a) provide articulation between the elementary schools and more diversified senior high work, (b) help students explore a variety of work-related experiences and identify their abilities and interests, and (c) guide students to information about their country, and their educational, employment, and training opportunities.

At the senior high level, the curriculum is intended to (a) provide a broadly-based program that is geared toward the needs of the national economy and allows students to move into middle-level technical and professional positions, and (b) help students learn to be problem solvers, develop independence and assume responsibility as members of Liberian society. While a national curriculum has been developed that reflects these goals, its implementation has been spotty because teacher guides and course syllabi have not been produced.

At the 1984 National Conference, the Working Group on Secondary Education offered a series of recommendations to improve the conditions of secondary education in Liberia. All of the curriculum recommendations centered on textbook availability and use. The group charged MOE with the responsibility of ensuring that an adequate supply of prescribed textbooks be made available in the counties at least three months prior to the start of school. They further urged that all public and nonpublic schools adhere to the prescribed textbook list and that these books be used for at least five years. The MOE was also

directed to prohibit the sale of unapproved instructional materials (e.g., teacher-prepared notes).

With respect to teachers, the recommendations centered on improving quality and incentives through more timely hiring processes of new graduates, enforcing the certification procedures, and requiring that teachers on training scholarships return to their districts for a specified period of time. Additional financial incentives were recommended for math and science teachers. Inservice training was recommended for secondary school teachers. The group recommended that the distribution of secondary schools across counties be made more equitable in order to ensure better access and that the Science and Technology Centers be made operational as soon as possible.

The need for high quality, consistent instructional supervision was another theme. Each county or region was recommended to have a supervisory team consisting of subject specialists who would receive supervisory training. Finally, the group recommended that the MOE provide better logistical support, training and facilities for education officers.

5.1.2 Structure

Secondary schooling is available through public, mission-sponsored, concession (sponsored by large companies such as Firestone and Lamco), privately sponsored and self-help schools. Students who complete the sixth grade are eligible to progress into junior high instruction consisting of grades seven, eight, and nine. A national examination is given at the end of ninth

grade. Students who pass the exam are eligible to move to senior high which consists of grades 10, 11 and 12. A second national examination is given at the end of twelfth grade. Eligibility to graduate is determined by a combination of scores on the twelfth grade exam and scores from twelfth grade coursework. Each school individually determines the weight assigned to these two sub-components. Sixteen schools offer junior high or senior high instruction exclusively; other schools offer various combinations of instructional levels.

In 1984, of all the schools that offered junior high or senior high instruction exclusively or in combination with other levels, 56 percent (251 schools) were government run, and 44 percent (209 schools) were run by missions or other private, nongovernmental entities. Table 5.1 presents a breakdown of schools by instructional level and management type for 1984.

Government partially supports the operating costs of the nonpublic schools through a subsidy scheme. However, the per-school amount of the subsidy has dropped, both because of an increased number of schools competing for the funds and, more recently, a decline in the amount of Government funds available for the subsidy program.

Within the Ministry of Education, secondary education is administered by the Bureau of Secondary Education under the direction of the Assistant Minister for Secondary Education, a position created in 1986. Other Divisions and Bureaus within the Ministry administer some programs related to secondary education.

Table 5.1

Total Enrollment by Grade and School Type
1984 Enrollment Data

	Total	% Girls	Total	% Girls	Total	% Girls	Total	% Girls
Junior High								
7	7410	.27	3561	.41	4191	.43	15162	.39
8	6425	.24	2984	.41	3521	.38	12930	.32
9	6513	.23	2821	.39	2881	.39	12215	.30
Total Junior High (7-9)	20348	.25	9366	.40	10593	.40	40307	.32
Senior High								
10	3725	.27	2877	.42	1917	.57	8519	.39
11	3413	.25	2874	.44	1512	.39	7799	.35
12	4023	.21	3229	.41	1789	.37	9041	.31
Total Senior High (10-12)	11161	.24	8980	.42	5218	.45	25359	.35
Grand Total	172664	.34	80391	.43	55870	.43	308925	.35
	.56		.26		.18			

Source: Ministry of Education, National Education Survey, 1984

5.1.3 Program

5.1.3.1 Students

Aggregate secondary school enrollments for 1984-1986 are reported in Table 5.2. Of the 300,000+ students in the education system, 21 percent (about 63,000) are in junior or senior high. Junior high students account for 13 percent; senior high students account for 8 percent.

Public secondary schools are losing enrollments while nonpublic schools are gaining. Overall, public schools account for 47 percent of the secondary school enrollments. Table 5.3 reports that between 1981 and 1984, public school junior high enrollments dropped 6 percent, while nonpublic school enrollments rose 179 percent. At the senior high level, public schools have lost 15 percent of their enrollments while nonpublic schools have gained 137 percent more students.

Explanations for the decrease in enrollments in the public schools typically focus on issues of quality. Public schools have few instructional materials, badly deteriorating facilities, and many unqualified teachers. Schools close frequently as teachers must travel to collect their salary checks. Further, the total yearly out-of-pocket expenses for a public secondary student are estimated at $157, a substantial amount in light of the $460 annual average per capita income. Parents, forced to weigh the sacrifice of family income against the marginal return on investments for secondary education, frequently choose to use their income in other ways.

Table 5.2

Distribution of Junior and Senior High School Students by Level (1984-1986)

	1984	1985*	1986*
Junior High			
7	15,162	14,144	14,123
8	12,390	12,888	12,023
9	12,215	11,647	12,114
Subtotal:	40,307	38.679	38,260
Senior High			
10	8,519	8,550	8,152
11	7,799	7,837	7,866
12	9,041	9,046	9,090
Subtotal:	25,359	25,433	25,108
TOTAL:	65,666	64,112	63,368

* 1985 and 1986 enrollments were estimated from 1984, using the progression rates reported in Table 5.3.

Table 5.3

Changes in Sector Shares of Elementary and Secondary Enrollments between 1981 and 1984

Institutional Type and Level	1981	1984	Percent Change
Public			
Pre-grades	.66	.51	-.18
Elementary	.67	.63	-.12
Junior High	.63	.50	-.06
Senior High	.59	.44	-.15
Total:	.66	.56	-.13
Mission			
Pre-grades	.14	.36	1.72
Elementary	.17	.18	.01
Junior High	.26	.23	.06
Senior High	.29	.35	.39
Total:	.18	.26	.46
Other			
Pre-grades	.20	.12	-.33
Elementary	.16	.19	.15
Junior High	.11	.26	1.73
Senior High	.12	.21	.98
Total:	.16	.18	.15

Table 5.4 reports progression rates for all categories of schools based on 1983-84 enrollment data. Progression rates above 1.00 reflect a combination of repetition and crossover of public school students to private schools. At the ninth and twelfth grades, the rates above 1.0 reflect repetition caused by students failing the national examinations given in those two years.

Student flow through the secondary grades adjusted for grade repetition is presented in Table 5.5. Since no national data are available on repetition, the 1987 repetition rates reported by the Monrovia Consolidated School System (MCSS) were used in computing national student flow statistics based on 1984 national enrollments. MCSS repetition rates are probably lower than the national rates, making present estimates of flow conservative.

Not only do nonpublic schools appear to be attracting more students, they also are keeping them in the system longer than the public schools. Nonpublic schools have higher progression rates than public schools from the sixth to seventh grade (1.35 versus .77) and from the ninth to tenth grade (.81 versus .57). Apparently, many parents are able to find the necessary funds to keep their children in school if they believe the instructional quality is meritorious.

5.1.3.2 Teachers

Table 5.6 reports the educational qualifications of public school teachers as of 1988. While more highly credentialed than primary teachers, the majority of secondary teachers still are

Table 5.4

Progression Rates Based on 1983-84 Enrollment Data
by Type of School

	Progression Rates			
	Public	Mission	Other	Total
Pre-1	.46	.17	.63	.38
1-2	.77	.82	.80	.79
2-3	.91	.91	.83	.89
3-4	.85	.91	.77	.85
4-5	.79	.88	.77	.81
5-6	.88	.89	.88	.88
6-7	.77	1.09	1.62	.91
7-8	.87	.84	.84	.85
8-9	1.01	.95	.82	.94
9-10	.57	1.02	.67	.70
10-11	.92	1.00	.79	.92
11-12	1.18	1.12	1.18	1.16

Table 5.5

Student Progression in Public Schools

Year	Grade						
	7	8	9	10	11	12	
1	14						
2		12					
3			12				
4				5			
5					5		
6						6	2

Table 5.6

Qualifications of Public School Teachers by County for 1988*

	Below High School	High School only	C Cert.	B Cert.	Assoc. of Arts Degree	B.Sci. Degree	Total
SOUTH WESTERN							
Monrovia		457	77	83	16	350	983
Montserrado	20	358	255	266	25	153	1057
Cape Mount	24	64	62	50	9	23	232
Bassa		146	83	42	7	38	316
Margibi		66	119	189	11	46	431
Bomi	11	51	50	50	12	14	188
Rivercess		2	51	27	11	5	96
Subtotal:	55	1124	697	707	91	629	3303
NORTH-CENTRAL							
Lofa	9	64	283	165	9	75	605
Nimba	1	278	711	392	48	70	1500
Bong	3	126	260	170	15	55	629
Subtotal:	13	468	1254	727	72	200	2734
SOUTH EASTERN							
Maryland		87	110	59	15	51	322
Grand Gedeh	2	230	163	88	15	43	541
Sinoe		156	169	84	32	22	463
Grand Kru		149	171	40	11	22	393
Subtotal:	2	622	613	271	73	138	1719
TOTAL:	70	2214	2564	1705	236	967	7756

* Based on 1988 payroll information.

Note: Pre-grade and in-service not included

underqualified. About 58 percent have less than B certification. Rural areas suffer more than urban areas from a lack of qualified teachers because there is little to attract teachers to the small villages. The MOE has proposed to the legislature a plan to offer free housing and salary incentives to qualified teachers willing to locate in rural areas. Such a plan could reduce the imbalance between urban and rural schools.

In general, there are fewer training opportunities for secondary teachers than for primary teachers. Preservice training for secondary teachers occurs at the two universities. Neither of the universities produces large numbers of graduates. Teachers College, at the University of Liberia, and the Cuttington University College Division of Education together produced a total of 35 graduates during 1986. Teachers College has attrition rates as high as 80 percent; while the number of students admitted in a given year hovers around 200, less than 20 percent graduate. Graduates of the two rural teacher training institutes generally have entered teaching at the elementary school level.

Graduates of preservice programs do not automatically enter classroom teaching. Faculty at the universities report that secondary graduates often accept administrative positions within the schools or MOE or positions within the private sector. If they do enter teaching, they typically stay for less than three years.

Inservice training opportunities for secondary teachers are limited. Few donors have supported in-country inservice training for secondary teachers, nor has GOL supported many such activities. UNICEF has sponsored some workshops for secondary teachers. Other workshops are sponsored by various Bureaus and Divisions within the MOE, and by the University faculties. Unfortunately, the workshops have not been part of a systematic plan of development for secondary teachers. Such a plan is needed, especially in rural areas where secondary teachers have less training than in urban areas.

USAID and Peace Corps did fund the Teacher-Text-Technology (TTT) project, a one-year program designed to train Science and Technology Center (STC) staff to manage the three operational Centers built by the World Bank's Third Education Project. The program was intended to train 15 Liberian secondary science, math and language arts teachers, 15 Peace Corps volunteers, and three Liberian coordinators. The science emphasis was maintained in the TTT curriculum, but the technical component (vocational and home economics) was dropped. Math and language arts were added to complement the science curriculum. The effort to recruit Liberian staff for the STCs by offering higher salaries was hampered by the National Liberian Teachers Union. Salary issues caused some recruits to leave the program before they could put their training to use in the classroom.

The retention of secondary teachers is difficult for several reasons. First, because secondary school teachers typically have

had more training than elementary teachers, they have better career options and frequently take better paying, nonteaching jobs immediately out of school. Second, the salary delays and reductions have caused many to be demoralized and disillusioned with teaching as a career choice. Salary payment lags of three or four months have been common, as illustrated by the salary disbursement schedule for 1985-1987 (Table 5.7). Two major salary cuts have been imposed, once in 1984, when all Government employees lost 5 to 16 2/3 percent depending on income level, and again in 1985, when salaries were cut by 25 percent, regardless of income level. In addition, on several occasions government employees have been required to contribute a month of pay for special projects, such as the building of the national radio station.

A third reason for teacher attrition is that until recently, there were few financial incentives for professional improvement. Up to 1980, years of teaching experience and level of training did not influence salary levels. Such a lack of incentives paralyzes administrators and instructional supervisors who have no financial means to reward professional development. A new salary schedule, established in 1986 (see Table 5.8), is used to determine starting salary for new teachers entering the system. Whether teachers already in the system will benefit from the schedule is uncertain. In addition, since there is no procedure for differentiated staffing (except as a teacher becomes a

Table 5.7

Schedule of Teacher Salary Disbursements
1985-1987

Month	Year	Date of Disbursement
July	1985	Oct. 3, 1985
August		Oct. 11, 1985
September		Oct. 18, 1985
October		Dec. 11, 1985
November		Jan. 21, 1986
December		March 21, 1986
January	1986	April 4, 1986
February		May 22, 1986
March		June 4, 1986
April		June 22, 1986
May		July 15, 1986
June		Aug. 6, 1986
July		Oct. 6, 1986
August		Nov. 11, 1986
September		Nov. 14, 1986
October		Dec. 16, 1986
November		Jan. 13, 1987
December		March 11, 1987
January	1987	April 4, 1987
February		April 22, 1987
March		June 12, 1987
April		July 17, 1987
May		July 18, 1987
June		July 28, 1987
July		Aug. 3, 1987
August		Sept. 28, 1987
September		Nov. 4, 1987
October		Nov. 24, 1987
November		Dec. 11, 1987
December		Jan. 8, 1988

Source: Ministry of Education, 1988.

Table 5.8

Approved Salary Scale for Liberian Teachers
1986

Level	Salary Amount
1. Below High School	1,784
2. High School Graduate	1,800
3. "C" Certificate	2,100
4. "B" Certificate	2,800
5. AA	2,400
6. B.Sc., B.A.	4,200
7. M.Sc.	5,800

principal), high performers cannot be granted master teacher status or accrue other professional benefits.

5.1.3.3 Curriculum

The secondary curriculum revision began in 1976 and was completed in 1980. While it was to be fully implemented in 1983, four factors led to widespread lack of implementation. Few schools have received copies of the curriculum, and many teachers were unaware that it existed. The 1984 National Education Survey (which supplied counties with copies of the revised national curriculum) found that 31-74 percent of the counties were not using the language arts curriculum, 31-73 percent were not using the math curriculum, and 27-73 percent were not using the science curriculum.

Second, although a curriculum was created, few course syllabi or teachers' guides were created that would help translate the curriculum into meaningful lesson plans. The 1984 survey reported that across the counties, 56-90 percent did not have English textbooks, 72-93 percent lacked math books, and 62-90 percent lacked science textbooks. Third, most schools had few textbooks to be used with the curriculum. Teachers tend to rely on any books that are available to define the curriculum in a given subject area. A recent arrangement should help remedy the textbook problem. A private U.S. organization, Books of the World, has agreed to supply 500,000 textbooks to Liberia on the condition that these texts are distributed without charge to the schools.

Fourth, many secondary teachers are not academically prepared to teach the content in the curriculum. While the recommendation of the 1978-1991 National Survey to develop a national curriculum was followed, the absence of any follow-through resulted in its not being implemented.

A 1984 study conducted by Cuttington University College illustrates these problems in the science area. Researchers examined eight public and nonpublic junior and senior high science programs in Bong and Lofa counties. They found few trained science teachers, inadequate textbook availability and limited lab facilities. There were 32 science teachers for 4,000 students, a ratio of 125:1. Only three mission schools had science texts for 50 percent or more of their students; the remaining five schools had far fewer textbooks. The one mission school that was best equipped (3 teachers for 150 students, textbooks, lab space) had only three of its 150 students fail the science subtest for the LNE. In contrast, two of the other schools in the sample whose facilities, equipment and science teaching force were much weaker had failure rates of 69 percent and 82 percent, respectively.

One continuing debate within the secondary school curriculum is the role that vocational/technical content should play. Viewpoints about the appropriate balance of academic and vocational/technical education (VTE) content in the secondary schools have shifted periodically. One expression of these shifts was the decision to build two multilateral high schools.

These high schools were to have three curricular emphases: (1) academic, (2) mechanical, and (3) agricultural. They were to be model schools intended to guide other secondary school developments. The problems this model was intended to address were low enrollments in secondary schools, inadequate preparation of secondary students for postsecondary institutions, geographical imbalances in the distribution of secondary education, the academic bias in the curricula of secondary schools and the anticipated vocational, technical and agricultural manpower shortages.

The two multilateral schools, Voinjama and Zwedru, were to replace existing secondary school facilities and offer: (1) strengthened science and math curricula, (2) vocational/ technical and agricultural exposure for junior high grades, and (3) a concentrated curriculum in one of three streams (academic, mechanical or agricultural) for senior high. Dormitory and housing space for students and staff were included. Planned enrollment was 600 for each school.

Construction of two schools was completed in 1978. Because of cost overruns and problems with power and water, the needs of the mechanical and agricultural programs were never met. The senior high curriculum became an academic one. Students were exposed to, but not trained in, mechanics and agriculture.

A second project, intended to enhance VTE and science education in the secondary schools and to provide better geographic access to secondary education, was the establishment

of four Science and Technology Centers funded by the Third World Bank Project. In most respects, this project failed to meet its goals. Problems with construction, facility design, the setup of labs, the delivery and availability of furniture and equipment, the ordering of supplies and security, as well as continuous water and electricity failures severely limited the effectiveness of these schools. Further, while the schools were intended to be "magnet schools" providing science education to other local secondary schools, the abandonment of a busing program limited the centers to those students within walking distance.

A further modification of the original intent came as the result of the Teacher-Text-Technology project (see Section 5.1.4.2) that was created to train personnel to staff and manage the three operational STCs. While the training curriculum contained the original science emphasis, the technology component (vocational and home economics) was not included. Mathematics and language arts were added to the science curriculum.

Currently, 12 secondary schools provide some vocational/ technical education and training, but Booker Washington Institute and Tubman High School are the major secondary school sources for such training. Since there is no standard for the quality or skill level of VTE graduates, it is not feasible to make direct comparisons among programs. But rough comparisons of inputs can be made. For example, Booker Washington Institute is a residential high school level program, including roughly 60 percent academic subjects and 40 percent VTE. The annual costs

are over $2,400 per year for each student. A four-year graduate of BWI will have received approximately $4,000 of VTE (probably an underestimate since VTE courses are typically more expensive than other subjects). A graduate of a postsecondary VTE institution will have had approximately $2,500 worth of VTE, delivered in a concentrated 12-15 month program. Since these latter graduates are highly sought after, it would seem postsecondary technical training is at least as good as Booker Washington Institute, but at a much lower cost. This result is consistent with comparisons in other countries.

Another concern is the degree to which secondary VTE programs are linked and integrated with the needs of the employers. Where academic and vocational/technical subjects are offered in the same institution, the tendency is for the VTE courses and students to have lower status and importance. Students do not wish to have future opportunities closed off by being restricted to a vocational track, even if they have no realistic prospect of attending a university program. The same tendency creates pressure to increase the academic and reduce the VTE components in the program. This pressure has been reported for the two main high schools specializing in VTE: Booker Washington Institute and Tubman High School. In such an environment, it is unlikely that the VTE programs will receive the necessary resources and support to maintain high quality. It also is more difficult to adjust the programs to the changing demands of employers because they are linked into an academic

curriculum which seeks other objectives. The higher cost and the generally less efficient environment make a strong argument for keeping VTE in specialized, job-linked settings.

5.1.3.4 Examinations

The Liberian National Examinations are administered at both the ninth and twelfth grade levels. The tests cover four subject matters: mathematics, science, social studies and language arts. Data for the 1984 and 1985 examinations for ninth grades and the 1984, 1985, and 1987 examinations for twelfth grades are presented by county in Tables 5.9 and 5.10.

The scoring criteria for these exams have varied over the last eight years. In 1981, the WAEC National Council Meeting directive specified that to pass the examination, students must achieve a raw score of 50 percent on each of the four subjects (math, 25 out of 50; science, 30 out of 60; English, 50 out of 100). Using these standards, large numbers of students would have failed, so the mean score on each subtest was equated to the former 50 percent criterion level. For example, if the mean score on the math test was 35, students who got a 34 would fail, those who got a 36 would pass. In 1983, the mean on the math test was 7.18. Under the 50 percent correct rule, 8.4 percent (578) of the students would have passed. Under the 1982 "correction" rule, 44.1 percent of the sample (or 3,030) passed.

In 1984, 99 percent of the ninth graders and 89 percent of the twelfth graders sat for the exams. However, only eighteen

Table 5.9

Grade Nine Examination Pass Rates
1984 and 1985

1985	9th Grade Year	Total Candidates	Mathematics			Science			Social Studies			Language A	
			Sat	Pass	%	Sat	Pass	%	Sat	Pass	%	Sat	Pass
Monrovia	1985	3341	2976	1199	40.3	2977	1352	45.4	2977	1333	44.8	2980	1441
	1984	35543	3002	1121	37.3	3157	1372	43.5	3157	1524	48.3	3164	1610
Grand Bassa	1985	526	413	215	52.1	412	274	66.5	412	216	52.4	413	274
	1984	553	436	195	44.7	436	233	53.4	443	218	49.2	442	269
Bong	1985	1112	943	412	43.7	943	483	51.2	945	540	57.1	946	485
	1984	1099	877	575	65.6	877	603	68.0	881	515	58.5	883	501
Gr. Cape Mount	1985	180	164	103	42.8	164	117	71.3	164	115	70.1	164	111
	1984	164	149	61	40.9	149	59	31.6	148	38	25.7	148	61
Grand Gedeh	1985	688	570	178	31.2	570	240	42.1	570	257	45.1	570	217
	1984	644	511	150	29.4	516	97	38.6	517	190	36.8	528	208
Lofa	1985	964	796	450	56.5	796	502	63.1	796	479	60.2	795	446
	1984	897	682	254	37.2	682	310	45.5	685	296	43.2	692	293
Maryland	1985	1013	834	267	32.0	836	348	41.6	836	328	39.2	836	311
	1984	743	586	183	31.2	586	189	32.3	586	153	26.1	594	179
Montserrado	1985	2426	2092	792	37.9	2093	963	46.0	2093	1019	48.7	2093	1148
	1984	2285	1998	721	36.1	1998	808	40.4	2022	810	40.1	2028	954
Nimba	1985	1580	1296	657	50.7	1298	779	60.0	1296	797	61.5	1298	666
	1984	1735	1355	782	57.7	1355	829	61.2	1358	867	63.8	1379	802
Sinoe	1985	447	366	186	50.8	365	193	52.9	363	187	51.5	366	200
	1984	439	323	90	27.9	323	124	38.4	324	137	42.3	322	133
Overall	1985	12277	10450	4459	43 %	10454	5251	50 %	10452	5271	50 %	10461	5299
	1984	12102	9919	4132	42 %	10073	4624	46 %	10121	4748	47 %	10180	5010

Source: West African Examination Council, Monrovia, Liberia, 1988.

Table 5.10

Grade 12 Examination Pass Rates
for 1984, 1985 and 1987 by Subject Area

			Mathematics			Science			Social Studies			Language Arts		
County	Year	Total Candidates	Sat	Pass	%	Sat	Pass	%	Sat	Pass	%	Sat	Pass	%
Monrovia	1987	-	2614	1836	70.2	2614	1839	70.4	2614	1962	75.1	2614	1740	66.6
	1985	2719	2413	1092	45.3	2413	1030	42.7	2416	1152	47.7	2417	1239	51.3
	1984	3543	3002	1121	37.3	3002	995	33.1	2988	1334	44.6	2995	1198	40.0
Grand Bassa	1987	-	220	99	45.0	220	107	48.6	220	131	60.0	220	131	59.5
	1985	294	251	134	53.4	251	144	57.4	252	151	59.9	252	170	67.5
	1984	265	232	97	41.8	232	104	44.8	233	106	45.5	241	104	43.2
Bong	1987	-	601	497	82.7	601	487	81.0	601	307	51.1	601	281	46.8
	1985	672	606	291	48.0	606	239	39.4	605	262	43.3	606	219	36.1
	1984	720	649	445	68.6	649	526	81.0	648	541	83.5	646	512	79.3
Gr. Cape Mount	1987	-	72	24	33.3	72	24	33.3	72	28	38.9	72	20	27.8
	1985	107	104	58	55.8	104	60	57.7	104	46	44.2	104	55	52.9
	1984	96	87	19	21.8	87	28	32.2	86	43	50.0	85	26	30.6
Grand Gedeh	1987	-	301	21	7.0	301	15	5.0	301	24	8.0	301	49	16.3
	1985	427	367	173	47.1	367	196	53.4	366	167	45.6	367	198	54.0
	1984	353	304	137	45.1	304	161	53.0	305	201	65.9	304	158	52.0
Lofa	1987	-	304	226	74.3	304	198	65.1	304	190	62.5	304	190	62.5
	1985	427	383	216	56.4	383	223	58.2	383	252	65.8	383	220	57.4
	1984	520	410	215	52.4	410	162	39.5	409	212	51.8	415	186	44.8
Maryland	1987	-	266	18	6.8	266	33	12.4	266	73	27.4	266	96	36.1
	1985	358	282	120	42.6	283	146	51.6	283	108	38.2	283	112	39.6
	1984	410	340	130	38.2	340	152	44.7	337	142	42.1	342	131	38.3

Table 5.10, continued

Grade 12 Examination Pass Rates
for 1984, 1985 and 1987 by Subject Area

County	Year	Total Candidates	Mathematics			Science			Social Studies			Language Arts		
			Sat	Pass	%	Sat	Pass	%	Sat	Pass	%	Sat	Pass	%
Montserrado	1987	-	1503	816	54.3	1503	801	53.3	1503	971	64.6	1503	775	51.8
	1985	1034	916	358	39.1	916	477	52.1	917	423	46.1	917	462	50.4
	1984	1117	1000	416	41.6	1001	415	41.5	1011	509	50.3	1013	491	48.5
Sinoe	1987	-	186	143	76.9	186	128	68.8	186	127	68.3	186	156	83.9
	1985	202	187	80	42.8	187	19	42.2	187	94	50.3	187	89	47.6
	1984	191	174	46	26.4	174	55	31.6	174	52	29.9	174	44	25.3
Nimba	1987	-	835	490	58.7	835	423	50.7	835	633	75.8	835	644	77.1
	1985	826	714	425	59.5	710	410	57.1	714	465	65.1	714	387	54.2
	1984	867	741	467	63.0	741	465	62.8	741	482	65.0	742	412	55.5
Overall	1987	-	6902	4170	60.4	6902	4055	58.8	6902	4447	64.4	6902	4082	59.1
	1985	7066	6223	2947		6220	2944		6227	3120		6230	3151	
	1984	8082	6939	3093		6940	3063		6932	3622		6957	3262	

percent of the students who sat for the twelfth grade examination passed all four subtests. The poor performance of students on the exams, especially in some of the rural counties, reflects the instructional problems previously discussed--the failure to follow a curriculum, lack of materials and textbooks, and unqualified teachers. As improvements in these conditions occur, performance should increase.

A new version of the National Examination has been created that will allow students to have some choice over what areas they will be tested on within science, language arts and social studies. Rather than responding to biology, chemistry and physics problems, students can choose one of these three areas. In English, the choice will be grammar and literature. Social studies choices will be history and geography. Exam syllabi for this new exam have been distributed to all principals but only urban schools are well enough staffed and equipped to be able to prepare students for the exam.

5.1.3.5 Facilities and Equipment

The National Education Plan, 1978, and the 1984 EHR Sector Assessment both stressed the need for better facilities for secondary education. This need continues. At the time of the 1978 survey, which reported data for 300 junior and senior secondary school, eight percent had libraries in the same building where instruction took place and 45 percent had libraries in a separate building. Only twenty percent of the schools had science laboratories that were used once a week or

more often. Seven percent of the schools had workshops for technical and vocational courses in the school building while another 31 percent had workshops in a separate building.

Similarly, a study of science curriculum and facilities conducted by Cuttington College faculty found that schools had instructional materials and laboratories. Inadequate water supplies and unreliable power were impediments to the operation of equipment needed in the science, mechanical and vocational aspects of the curriculum.

5.1.3.6 Costs and Donor Support

Annual GOL expenditures per pupil for secondary students were estimated using three sources of data: MOE expenditure data, MCSS expenditure data, and the MOE current payroll. Junior high costs are $245; senior high cost are $442 per student per year.

To obtain total unit costs, family unit costs must be added to GOL expenditures. These contributions are estimated at $157 per year for public secondary students. They include an annual registration fee of $30 (rural = $20) plus fees for uniforms, paper, books and assorted other school supplies. Total unit cost for secondary is approximately $600. While the $157 annual parental expense for public secondary education is modest compared to the $300-$800 annual fees for private secondary education, the amount is substantial in a country where the average annual income per person is estimated at $460.00. For a

rural family with two children in secondary school, school fees could represent 68 percent of the annual income of the household.

Unit and cycle cost data for junior and senior secondary education are shown in Table 5.11 and 5.12. Progression and repetition rates were calculated using a 27 percent repetition rate for junior high and a 25 percent rate for senior high. The tables report that the average cost of producing a junior high graduate in three years is 8.2 student years or $3,296, and the average cost of producing a senior high graduate in three years is 6.7 student years or $4,013. The high costs are a function of wastage, repetition and low pass rates.

The total allocation for secondary education in the four World Bank (WB) education loans to Liberia since 1972 has been $5,342,200 or 19.9 percent of the total loan amount. Four aspects of the secondary education components reveal less interest in secondary schooling than this figure would represent. First, secondary education was included in only two of the four World Bank projects; second, these two projects involved the construction of only six buildings with some limited support for complementary program development. Third, these six buildings were among the most costly of any structures built by the Bank, thus inflating the secondary education expenditure figure. Finally, the two multilateral high schools and four science technology centers constructed with these funds were as much directed toward vocational/technical education as they were intended to serve secondary education needs. These factors

Table 5.11

Unit and Cycle Costs
Public Junior Secondary Schooling

Unit Costs

GOL	$245
Families	157
	$402

Cycle Costs

Level	Seven	Eight	Nine	
1	100			
2	9	87		
3		9	88	37
			9	4

The average cost of producing a junior secondary graduate in three years is 8.2 years or $3,296.

The average cost of producing a junior secondary graduate in three or four years is 7.4 years or $3,108.

Note:
The progression rates across grades (.87, 1.01) derived from 1984 data. The repetition rate was taken from Azango, B. B., Decentralization and Educational Efficiency in Liberia, 1987. The calculation of the number of graduates was based on W.A.E.C. figures for 1984.

Table 5.12

Unit and Cycle Costs
Public Senior Secondary Schooling

Unit Costs

GOL	$442
Families	157
	599

Cycle Costs

Level	Ten	Eleven	Twelve	
1	100			
2	5	92		
3		8	109	49
			12	5

The average cost of producing a senior secondary graduate in three years is 6.7 years or $4,013.

The average cost of producing a senior secondary graduate in three or four years is 6 years or $3,594.

Note:
The progression rates (.87, 1.01) are taken from 1984 data. The repetition rate was taken from Azango, B. B., Decentralization and Educational Efficiency in Liberia, 1987. The calculation of the number of graduates was based on W.A.E.C. figures for 1984.

reduce the significance of the percent of total funds spent on secondary schooling and illustrate the Bank's lack of emphasis on secondary education (Snyder and Nagel, 1986).

5.1.3.7 Quality of Instruction

The preceding discussion has documented severe limitations that add up to an inadequate instructional program at the secondary level. The two major causes appear to be (1) the nearly complete absence of instructional materials (textbooks, learning packages, worksheets), and (2) ineffective teachers. The problem of ineffective teachers will be discussed in more detail than the absence of instructional materials since the latter is relatively straightforward, although not easily solved.

Teachers are ineffective for at least three reasons, none of which are mutually exclusive. First, many teachers have not received sufficient training. About half have less than B certification which requires two years of teacher training. Large-scale, donor-supported programs of inservice training have been directed toward elementary rather than secondary teachers. Smaller scale efforts to deliver inservice training to rural teachers are hampered by the isolation of villages. Transportation is rarely available to bring groups of teachers to a central location for a workshop. Principals of secondary schools may be no more highly trained than their teachers, limiting their capacity to serve as developers of teachers.

Inadequate training is a primary cause for ineffective teachers but not the sole cause. Well-trained teachers cannot do

their jobs without access to existing instructional materials or the facilities and equipment to produce such materials. To prepare lessons on even basic concepts, teachers need textbooks as resources. If they are expected to implement a curriculum, they need teachers' guides. To encourage active participation of students with the subject matter, teachers need to be able to create and reproduce exercises, worksheets, written assignments and examinations. Insufficient materials plus the uncomfortable physical surroundings in many of the country's schools combine to form a powerful deterrent to effective instruction.

A third explanation for why teachers are ineffective is the continual interruption of their classroom time. One source of interruption is the need to collect or cash paychecks. It is not uncommon for teachers to be absent from school for a week or more to take care of these tasks. Even when principals distribute paychecks to teachers at the school, they often cannot cash them locally without being assessed a large discount. Further interruption of classroom work occurs because teachers have second jobs that require them to be frequently away from school. Teachers face few negative consequences for these absences because there is little monitoring of teacher behavior at the building level. Individual entrepreneurship appears to be viewed as an entitlement of those in the teaching profession.

The quality of instruction is directly linked to teacher quality and effectiveness. More training will help, but it must be coupled with an increase in instructional materials to have

long-term effects. Any reduction in the amount of time teachers are absent from the classroom will lead to more instructional time for students.

5.2 Analysis

5.2.1 Needs

The three areas of greatest need in the secondary education subsector are (1) to improve the quality of the instructional program to raise students' achievement, (2) to ensure articulation between the PEP and the junior high curriculum, and (3) to reduce the drain on secondary school resources caused by vocational skill tracks in twelve secondary schools.

5.2.2 Plans

The MOE has plans to provide implementation support for the national curriculum in the form of course syllabi and inservice workshops. The hiring of only B level certification teachers for secondary schools is another goal.

5.2.3 Constraints

The highest priority within the Education sector is to strengthen the primary schools. This priority will benefit secondary education in the long run. Students will enter junior high better prepared, with higher levels of academic achievement. In the short run, secondary education suffers from this priority because existing and new resources flow towards primary teachers and students. There is no indication that the economic troubles

of the GOL will improve to the point where the two subsectors of elementary and secondary education can share equally in the available resources.

MOE's priorities for improving primary education appear to reflect those of the public as well. More children are affected by public elementary education than by secondary education. Parents, if they are able, send their children to private schools beginning in junior high. The private sector needs workers who have basic literacy skills to be developed through primary education.

If secondary education is a lower priority, improvements in that subsector must be planned in the context of a longer time frame than for primary education. Assuming this, a change in one or two critical procedures, such as a decision to let schools retain most of the registration fees they collect, will provide much needed short-range help to secondary schools.

5.2.4 Issues

Overall, the major efficiency issues in secondary education relate to (1) the low quality of instructional programs and student achievement, (2) attracting and retaining qualified teachers, (3) the articulation between the PEP and the junior high curriculum, (4) vocational/technical education curriculum, (5) female participation rates, and (6) the decentralization of administrative functions.

5.2.4.1 External Efficiency

The secondary education subsector faces three major external efficiency issues. First, it must supply enough qualified graduates to join the nation's work force. Second, it must produce graduates who are academically acceptable to the two universities. Third, it must produce graduates who do not have to undergo remedial training within corporations.

Supplying graduates to meet the country's manpower needs is one goal of secondary education. Employment options in Liberia have decreased since 1981. The 1985 Manpower study (Root, U.S. Bureau of Labor Statistics) showed employment declines in mining (-51%), construction (-96%), manufacturing (-36%) and trade (-36%). The only category to show a substantial increase was that of services at +53 percent. For the next five years the supply of skilled manpower will be more than sufficient to meet manpower demands, and surplus labor will be available. With average annual growth rates estimated at 4.7 percent (based on preliminary 1984 census results) large numbers of youths seeking jobs will be added to the labor force each year.

To be competitive for a decreasing supply of positions in the private sector, applicants will benefit from a high school education. A 1986 study conducted by the Agricultural and Industrial Training Board revealed that many industry positions now require a twelfth grade diploma, although many current occupants of these positions do not themselves meet this requirement. For example, 86.2 percent of the craftsmen in the

Utilities/Transportation/Communication sector have not finished twelfth grade. Companies who have settled for less education in the past, however, will seize opportunities to upgrade the educational level of their work force, if possible. If an oversupply of manpower exists, educational level can be used as a selection tool. If employers are serious about hiring only high school graduates, the secondary education system must find ways to reduce attrition rates and raise examination scores so that more graduates are available.

In 1987, 6,000 students sat for the admissions examination for the University of Liberia. Pass rates were not available for 1987, but pass rates for both sections of the exam for the 1984, 1985 and 1986 were 2.3 percent, 2.9 percent and 4.0 percent, respectively. This suggests that in 1987 less than 300 students out of the 6,000 who sat are likely to pass the exam. Of those admitted annually, at least 1,000 students must take high school level courses before beginning their Bachelor's degree course. Once admitted, many students fail coursework and eventually drop out. The wastage rate (proportion of students who fail to graduate) is 60 percent. Pass rates for the Cuttington University College admission exam also are typically less than five percent. These high percentages of failure rates at both institutions highlight the inadequacies of the current secondary system to develop high school level competencies.

The problem of underqualified high school graduates plagues employers as it does higher education institutions. Although

statistical data are not available from corporations, educators report that many corporations have remedial programs into which they place new hires who are high school graduates. These programs focus on basic oral and written communication skills and computation. The need to recycle students back through instruction that should have taken place in high school further reduces external efficiency.

5.2.4.2 Internal Efficiency

Problems with internal efficiency in secondary education are evidenced by the poor national examination performance, the difficulties in recruiting and retaining qualified teachers and the lack of articulation between the PEP and junior high instruction.

Results on the Liberian National Examination (LNE) at both the ninth and twelfth grade levels raise serious questions about the effectiveness of the secondary schools. In 1984, only 18.4 percent of the twelfth grade students were able to pass all four subtests of the examination. Because the LNE is written by Liberian educators, claims of cultural biases or insensitivities to Liberian education are not persuasive. Educators disagree about the causes of poor test performance (Agbenyega, Morris and Henny, Final Report, 1984). Many argue that the explanation for poor performance resides within the educational process itself, citing unprepared teachers, inadequate instructional materials, decrepit facilities and weak curriculum. Students lack the

motivation to achieve, some believe, while others posit that the examinations themselves, and the standards against which performance is judged, are at fault.

There can be no disagreement about the generally poor quality of secondary education in Liberian public schools. Teachers make up their own curriculum, drawing upon a textbook if available, or attempting to recall what they have learned in school. Textbooks and other instructional materials are in short supply or nonexistent. Schools close frequently. Teachers are absent. Conditions like these run counter to all principles of effective instruction. Students need to spend time-on-task and be able to access instructional materials. They need opportunities to apply what they learn and to receive feedback on their performance. Without such opportunities students will have few resources to bring to bear on comprehensive examinations. Some observers attribute low achievement to lack of motivation more than lack of instructional quality, citing that students perceive success to be more related to familial or political influence than to individual, academic achievement.

Some educators blame the examinations for students' poor performance. They charge the examinations are too difficult for Liberian students, implying that the test item selection process is flawed. In the process used by WAEC to construct the LNE, Liberian educators write items which are then reviewed by boards of judges. Items which survive this review are then piloted on small groups of students. Criteria are applied to identify those

items that should be dropped, modified or used. Analyses are later performed on test data to locate problem items. The WAEC procedure for test construction are acceptable assuming the test items reflect the domains of knowledge appropriate to the secondary curriculum. If the secondary curriculum is not implemented in the schools students will not receive systematic instruction in these domains of knowledge.

Scoring procedures used for these examinations since 1983 have led to a more optimistic picture of performance than is warranted. Pass rates have been lowered to accommodate the low group means on the subtests. This practice allows, for example, students with less than one third of the items correct in a given subtest to pass. These low pass standards are exposed later, when, for example, high school graduates apply to the University of Liberia. Up to 80 percent fail some part of the admission examination and need remediation.

A second issue of internal efficiency is the alignment of junior high curriculum with the PEP curriculum. Within five years, the PEP methodology will be in place in all of the nation's public schools. This learning system is structured into a series of lessons, modules and units for each of four subject matter areas. Quizzes and criterion-referenced tests are included at various points.

The implications of the highly structured and prescriptive PEP methodology for the junior high curriculum have not yet been given careful consideration. The PEP has major implications for

junior high. First, more students may actually finish the sixth grade. Because the PEP methodology offers a more highly structured, sequential approach than conventional Liberian primary classrooms use, children's progress will be monitored more carefully. Learning problems will be obvious if children slip behind in the number of units they are to cover. Such monitoring may keep more children in school longer because their own expectations about what they can achieve will be enhanced. That more children may successfully complete the sixth grade and thus be eligible to move into seventh grade raises the problem of finding adequate space, especially in crowded urban schools. Teacher and parent expectations are also likely to undergo changes in the direction of wanting their students and children to be successful within the system.

A second implication of PEP is that the junior high curriculum will need to be upgraded to accommodate more competent students. The PEP system should promote higher levels of competence resulting in less need for remediation. Most reports of current junior high instruction suggest that it is repetitive of elementary instruction. Entering students require extensive remediation and reteaching. If the junior high curriculum is upgraded, the skills of the teachers who deliver the curriculum must also be upgraded. A seventh grade teacher who normally presents fifth grade math content will find that he now can teach higher level math. Some teachers will need help learning more advanced content themselves.

Further, if the entry skills of an incoming student can now be compared with other students (on the basis of PEP sixth grade examinations performance), the potential exists to assign different students into different levels of instruction. In summary, if less remediation is required and if more individual student information exists, the junior high curriculum must be modified to accommodate the needs of more competent students and, possibly, to track students with varying levels of achievement differently.

Students who have completed six years under the highly structured PEP approach with its closely monitored activities and frequent feedback will develop expectations about how instruction should occur. An abrupt switch to a different kind of classroom instruction, especially if there are few instructional materials available, will be traumatic for many students. One solution is to make the seventh grade a transition year in which the PEP-type techniques are gradually phased out and replaced by more conventional approaches. A second option is to prepare a junior high curriculum that incorporates the best elements of PEP and conventional junior high instruction. Naturally, as the progression continues, the senior high curriculum must undergo examination and modification as well.

The current problems in recruiting and retaining secondary school teachers is a third constraint on internal efficiency. Estimated teacher demand for 1982 to 1991 are presented in Table 5.13 for teachers at the primary, junior high and senior high

Table 5.13

Ten-Year Teacher Training Needs Based on Three Estimates of Teacher Demand 1/, 2/

Growth Level	Projected Rates of Teacher Demand 3% Prim.	3% Jr. High	3% Sr. High	5.5% Prim.	5.5% Jr. High	5.5% Sr. High	8% Prim.	8% Jr. High	8% Sr. High
1982	157	74	35	287	136	64	417	187	93
1983	161	76	36	303	143	68	451	213	101
1984	166	79	37	319	151	71	487	230	109
1985	171	81	38	337	159	75	526	249	118
1986	176	83	39	356	168	79	568	269	127
1987	181	86	41	375	177	84	613	290	137
1988	187	88	42	396	187	88	662	313	148
1989	193	91	43	417	197	93	745	338	160
1990	198	94	44	440	208	98	773	365	173
1991	204	97	46	465	220	104	834	395	186
TOTAL:	1794	849	401	3695	1746	824	6046	2859	1352

1/ No allowance for attrition; constant student/teacher ratios of 30:1 at primary, 14:1 at junior high, and 19:1 at senior high; base 1981 teachers projected from 1978 survey at 8% per year, giving 5,218 at primary, 2,468 at junior high, and 1,166 at senior high.

2/ Annual output of teacher training institutions roughly 250 at the primary level, 50 at junior high, and 30 at senior high. (Source: MPEA Working Papers)

Source: 1983 Sector Assessment.

levels. The estimates are conservative since they assume no attrition and constant student/teacher ratios. Recent enrollment data suggest a decline in overall enrollments but this is expected to be temporary. The PEP will likely raise both participation rates and progression rates.

Projections are made for three possible levels of annual growth in school populations: three percent, 5.5 percent and eight percent. The three percent level was selected to illustrate requirements for growth in school population matching the expected growth in the general population, meaning no effective change in enrollment ratios. The eight percent level was selected to show requirements if a maximum rate of expansion were to occur. Finally, the 5.5 percent level was selected to show requirements midway between the other two.

The present system for teacher education can meet only the most conservative projection for new teachers over the next ten years--one based on no increase in the enrollment ratios with constant student/teacher ratios. If allowances are made for attrition, the present system might not even be able to meet this conservative projection of a three percent growth. Because attrition rates for secondary teachers are high, the problem is made more severe.

Finally, the role of vocational education in secondary schools represents a continuing problem of internal efficiency. The lack of compatibility of specialized vocational/technical education with operations in secondary schools is a serious

impediment to the effectiveness of VTE. The demands of the regular curriculum and the lower status of vocational/technical education programs create dysfunctional pressures and rigidities in the organization. These can prevent programs from remaining responsive to the needs of the labor market and from receiving the status and student loyalty they deserve.

5.2.4.3 Access and Equity

There are wide variations--geographical as well as urban/rural differences--with respect to access to quality instruction. Forty-seven percent of all junior high enrollments and 61 percent of those at the senior high level are in Montserrado County. Similar variation is reported in The National Education Survey 1978, and has not changed substantially over the past ten years. Compounding these imbalances in access, according to the Second National Development Plan and as reflected by regional variations in teachers' salaries in the Ministry of Education's budget, is a concentration of more highly qualified teachers in the coastal areas.

Teachers' salaries vary meaningfully by county. This variation is due largely to differences in the proportions of primary to secondary school teachers by county, the primary teachers usually being less qualified and thus less paid, and from between-county differences in the qualification levels of teachers. Thus, Montserrado County teachers have the highest average salary because of a larger proportion of secondary

teachers and, within each educational level, more qualified teachers.

There are no formal barriers restricting female enrollments but girls are significantly underrepresented at the secondary level. Girls account for an overall enrollment of 32 percent at the junior high level and 35 percent at the senior high level. These disparities reflect social, economic and cultural factors. However, there also are substantial variations in female enrollments across counties. At the junior high level, female enrollments range from a low of 20 percent for Lofa County and Sinoe County to a high of 34 percent for Montserrado County. At the senior high level, enrollments range from a low of 17 percent for Grand Cape Gedeh County to a high of 36 percent for Grand Cape Mount County. Overall enrollments for girls were slightly higher in 1984 than in 1982: 32 percent versus 26 percent at junior high, and 35 percent versus 22 percent at the senior high level.

Data on percentages of female enrollees show a slight decline in female participation by level in formal education: 39 percent at preprimary and primary, 32 percent at junior high, and 35 percent at senior high level. The Government wishes to redress these imbalances in female participation, as well as those related to geographical access, and will examine ways to do so within the financial constraints Government faces over the next several years.

5.2.4.4 Administration and Supervision

A Bureau of Secondary Education headed by an Assistant Minister was established in the MOE in 1987 to coordinate secondary education activities. County education officers report to this Assistant Minister. However, other bureaus and divisions within the Ministry also play a role in administering the programs of the secondary schools. The Bureau of Professional and Technical Education is charged with science and technological education programs at the elementary and secondary levels. Divisions in the Bureau that relate to secondary education are agriculture education, home economics education, music education, vocational/technical education, media education and science education. All of these divisions attempt to supply schools with instructional materials and supplies and to run occasional in-service workshops for teachers.

The three regional education centers were meant to be the source of instructional supervision for secondary schools. The supervision function has never been effective, however, because of the lack of funds for the acquisition, maintenance and operation of the vehicles required for supervision in the rural areas. The regional centers have received no operating budgets in two years. As discussed in other sections of this assessment (see Chapters 2.0 and 4.0), the MOE should consider eliminating the regional education centers. Personnel now serving as REOs, CEOs and DEOs could move into positions in the secondary schools, as principals or assistant principals, where they could use their

instructional supervision skills. Others might become instructors in the programs at the Centers for Inservice Education (see Chapter 6.0).

5.2.4.5 Cost and Financing

It costs families about $157 a year for each child they send to a public secondary school. Considering the low pass rates on national examinations, parents must question the worth of the investment. So, too, must the GOL which spends $250 and $450 for each junior and senior high student, respectively.

If instructional quality can be enhanced, these investments may have greater pay-off to individual students, their families and the GOL. One strategy for improving education quality is to leave student registration monies at the school level to be used for purchase of instructional materials. A second approach would be to recruit and attract more highly qualified teachers. More dramatic changes are unlikely, given the economic constraints faced by the GOL.

5.2.5 Conclusions

The preceding analysis forms the basis for five conclusions:

Conclusion 1. The need for a high school diploma will be increasingly important to young men and women hoping to enter an oversupplied labor market in the next ten years.

Conclusion 2. Instructional programs that lack a viable curriculum, adequate instructional materials, and qualified

teachers have resulted in low levels of student achievement on the Liberian National Examinations.

Conclusion 3. Compared to primary education, secondary education has not enjoyed the same level of donor funding, or MOE support, for inservice education or curriculum development.

Conclusion 4. There has been no systematic attempt to study the articulation of the PEP system with the junior high curriculum.

Conclusion 5. The vocational/technical strand in secondary education causes a drain of resources away from the academic curriculum and does not compete well with nonsecondary vocational education institutions in quality of training.

5.3 Recommendations

Recommendation 1. Follow through on the implementation of the national curriculum in all secondary schools by creating teachers' guides and suggested lesson plans.

The national curriculum is not available in many secondary schools. Lacking the curriculum, teachers rely on available textbooks, or their own memories to decide what to teach and how to teach it. Educational quality could be improved by providing more assistance to teachers in the design of classroom instruction through the development of teachers' guides and lesson plans.

Recommendation 2. Schools should rent textbooks to students.

A major explanation for the low quality of instructional programs is the lack of textbooks. Since textbooks are expensive, many students go without. Compounding the problem, classroom themselves have few or no textbooks. If schools in a district or county agreed to cooperate, they could band together to order textbooks from vendors with funds from student registration fees retained at the school level. The school would own the textbooks and rent each book to students for one or two semesters, with fines assessed for nonreturn or damage of the books. If necessary, two students might operate as partners to rent a textbook and share it for the semester. Where schools are in close proximity, they might develop a system in which books could be traded back and forth at various points in the semester.

Recommendation 3. Eliminate vocational education programs from the secondary schools.

At present, secondary schools do not deliver high quality vocational education programs, both because schools cannot afford the cost of these programs and because teachers are not trained to teach this content. What meager equipment exists in the schools usually is broken, with no funds for repair. Facilities are not well-designed or maintained for these programs. Most employers argue that many of the secondary vocational education students are not prepared and need to be retrained once they enter the work force. Resources currently directed to vocational programs in secondary schools should be used to reinforce and improve the teaching of basic literacy and numeracy skills.

Recommendation 4. The junior high curriculum must be modified to to build on the PEP objectives and outcomes.

In the next five years, all public primary schools will use PEP materials. Primary graduates are expected to be better prepared academically than current graduates. This will put pressure on junior high school teachers to provide higher level and higher quality instruction. Work should start now to align junior high instruction to the changing demands of the education system.

6.0 TEACHER EDUCATION

6.1 Status

Teachers and teacher education are frequently the focus in discussions of the need for change in Liberian education. This national attention has raised provocative questions about how best to recruit and prepare new teachers and upgrade the skills of experienced teachers. More clearly articulated certification policies and the new salary schedule convey the message that teaching is becoming more of a profession. A new project, the Liberia Primary Education Project (PEP), has generated a need to find efficient ways to prepare the nation's 3,000+ primary teachers and principals to use a highly sequenced teaching methodology in the classroom. Such indicators of progress suggest that the problems of teachers and teacher education are being addressed.

Running parallel to these advances, however, are chronic symptoms of a troubled educational system, symptoms which continually thrust teachers and their profession before the public in a negative way. Low salaries and long payment delays have led to public displays of teacher unrest. To many, teaching is viewed as a temporary stop on the way to a real job. Once in the profession, teachers with strong credentials are lured quickly into better paying positions in administration or the private sector. The economic forecast for the Government of Liberia does not promise relief from the conditions that cause many teachers to be dissatisfied or leave the profession.

The usual distinction between preservice and inservice training is not useful in Liberia because, until recently, most teachers began teaching without training or credentials. Of Liberia's 7,756 teachers (excluding preprimary), 29 percent do not hold certification. Of those who are certified, 33 percent hold C level, the lowest form of certification. Only twelve percent of the teaching force have bachelor's degrees. A disproportionately large number of elementary teachers are underprepared and unqualified.

6.1.1 National Goals and Strategies

The major teacher education theme running through both the 1978-1990 National Education Plan (MOE, 1977) and the Final Report of the 1984 National Conference on Education and Training was to improve the supply and quality of the teaching force. The National Plan recommended seven goals:

1) to increase the supply and quality of elementary teachers;

2) to establish a training institution for junior high teachers;

3) to increase the supply of senior high teachers, especially in the areas of natural sciences, vocational education, mathematics, English and French;

4) to develop an industrial arts training program;

5) to intensify the inservice training programs to upgrade the skills of unqualified and underqualified teachers;

6) to develop programs for training education specialists in instructional supervision, guidance and counseling, curriculum development, evaluation, educational administration and teacher training; and

7) to provide incentives to retain teachers.

Many of the same issues surfaced in the recommendations of the Working Group on Teacher Education of the 1984 National Policy Conference. This group recommended that a regulatory body be established to enforce government requirements in teacher education, that universities strengthen their curricula, and that efforts be made to improve the quality of the curriculum, teaching staff and students at the Rural Teacher Training Institutes. They also recommended that the new certification scheme recommended in an earlier year actually be implemented systematically and that an Accreditation Board be reactivated.

Some of these recommendations have been addressed since the 1984 National Conference. For example, the new certification policy that established more stringent requirements for A, B, and C level certification and regularized the procedures for applying for certification was implemented in 1987. Inservice programs were undertaken in the form of both the Improved Efficiency of Learning project (IEL) and CINSTEP. The implementation of Primary Education Project (PEP) extends the inservice teacher training started under these earlier projects.

Progress on other goals and recommendations is less impressive. The activities of the various preservice and inservice programs are not well coordinated. Incentives for teaching have not improved, resulting in lowered enrollments and attrition from training programs and the loss of qualified teachers to other sectors.

6.1.2 Structure

Pre- and inservice teacher training take place at two- and four-year programs at training institutes and universities and through a variety of shorter inservice programs. The Fourth World Bank inservice project and the USAID IEL projects have been the most systematic inservice efforts in the past five years. Approximately 2,000 primary and junior high teachers have been involved in these two programs. The PEP project will deliver training to more than 3,000 primary teachers and principals in the next five years. A 1986 policy now requires that all entering teachers must be certified. The large backlog of uncertified teachers in the field, however, is the target of recent inservice programs.

Two rural teacher training institutes, at Kakata and Zorzor, offer two-year Professional Teaching Certificate Programs attended by those wishing to be primary or junior high teachers. Four-year degree programs leading to a Bachelor of Science degree, primarily for those who wish to teach at the secondary level, are found at the Tubman Teachers College of the University of Liberia and the Education Division of Cuttington University College.

Certification requirements are described in the Handbook of Policies and Procedures for Certification of Educational Personnel in the Republic of Liberia (MOE, 1982) and summarized in the document entitled Certification of Liberian Teachers

(1987) produced by the Division of Teacher Certification. To earn a C certificate a person must hold a high school certificate and have completed one year of teacher training. A B certificate requires two years of teacher training. An A certificate requires that a person have a BS degree in education and is offered at three levels: A1, a bachelor's degree in education; A2, a master's degree in education; and A3, a doctorate in education.

The certification procedures require that candidates submit a curriculum vitae, high school certificate, official transcripts from all academic work and a health certificate to the Certification Division of the MOE. The Professional Certification Committee of the Board of Certification recommends acceptance/rejection to the Board of Certification who then informs the Director of Certification. The Minister of Education must sign all certificates.

Several problems arise in the implementation of these procedures. First, the MOE runs out of blank certificates for approved candidates. This postpones their certification, which then postpones their employment. Second, the delay between submitting materials and receiving the certification can be long (some teachers report delays of 6-8 months) because applications are processed in batches rather than individually. Third, candidates from the RTTIs frequently fail to submit a high school certificate because they never passed the Liberian National Examination.

6.2 Programs

The teacher education system in Liberia is complex with many subcomponents, all of which maintain some level of autonomy. To impose some order on this system, the program description that follows is organized into the three major categories of teacher training activity: (1) preservice university programs, (2) preservice teacher training institute programs, and (3) major inservice programs. Each category will be discussed in terms of students, faculty, curriculum, facilities and equipment, cost and donors, and quality of instruction.

6.2.1 University-based Programs

The two university preservice programs are found at William V. S. Tubman Teachers College of the University of Liberia and the education division of Cuttington University College. Both institutions offer Bachelor of Science degree programs in elementary and secondary education. Graduates are eligible for an A level certification.

6.2.1.1 Students

Despite a 42 percent rise in the number of students admitted to Teachers College (of the University of Liberia) from 1984 to 1987, the number of graduates decreased by 40 percent from 1985 to 1986 (see Tables 6.1-6.3). Roughly 15 percent of all of those admitted from 1984 to 1987 graduated. This high attrition rate is not easily interpreted because information about why students do not finish is unavailable. Exit interviews for

Table 6.1

Teacher Output at University of Liberia
Teachers College and Cuttington University College
1970-1986

Year	University of Liberia	Cuttington University College
1970	24	8
1971	15	3
1972	11	1
1973	16	4
1974	13	11
1975	12	9
1976	22	10
1977	21	8
1978	26	15
1979	19	15
1980	25	14
1981	19	11
1982	20	20
1983	19	16
1984	33	7
1985	36	10
1986	22	13
Total	353	175

Table 6.2

Students admitted to the University of Liberia
Teachers College 1984 to 1987,
by Level and Gender

	Elementary			Secondary			
	Male	Female	Total	Male	Female	Total	Total
1984	3	9	12	151	16	167	179
1985	4	9	13	179	13	192	205
1986	4	11	15	180	29	209	224
1987	13	10	23	206	26	232	255
Total:	24	39	63	716	84	800	863

Table 6.3

1987 Teachers College Enrollments
by Level, Specialization and Sex

Specialization	Male	Female	Total
Secondary Education			
Social Studies	77	5	82
Math	55	0	55
English	36	11	47
Language Arts	17	0	17
Science	8	0	8
Subtotal:	193	16	209
Elementary Education			
Language Arts/ Social Studies	6	10	16
Math/Science	7	0	7
Subtotal:	13	10	23
Total:	206	26	232

students who leave the program before completing it would provide faculty with better data to understand the attrition. Cuttington's rate of graduation has remained relatively stable for the past four years.

No formal follow-up studies of graduates have been conducted to determine how many actually enter teaching and for what length of time. However, faculty at Teachers College indicate that many of their students accept administrative positions in the educational sector and often advance quickly into leadership roles. If graduates do accept teaching positions, they typically stay in the classroom for less than three years. Many graduates of Cuttington University College are inservice teachers who return to the classroom.

6.2.1.2 Faculty

The Teachers College has 21 full-time faculty. Of these, eleven hold graduate degrees--five hold doctorates and six have masters' degrees. In addition, there are three teaching assistants who hold bachelor's degrees, and one part-time instructor who holds a masters degree. The number of faculty per area of specialization is shown below:

Area of Specialization	Number of Faculty
Science	2
Math	2
English	5
Language Arts	2
Social Studies	2
Curriculum & Instruction	1
Music	1

Agriculture	1
Media	1
Education Psychology	2
Education Administration	2

The university teaching experience of Teachers College faculty ranges from three years to 28 years.

From 1978-1984, twenty-two faculty from Teachers College were granted World Bank or GOL funded study leaves, seven for doctorates and fifteen for masters degrees. Of the first ten who were to return to UL after completing their studies, seven returned, one went on for a doctorate, and two failed to return. Of the ten who left during 1983, two are pursuing graduate work in business education.

Cuttington University College has six faculty in the Education Department who range in teaching experience from 1.5 to 28 years. Three hold doctorates, two hold masters degrees and one holds a certificate. The faculty at both Teachers College and Cuttington have advanced degrees from well known American universities and extensive teaching experience in the universities. Such expertise seems underutilized in light of the small number of graduates annually.

6.2.1.3 Curriculum

The main goal of both the Teachers College and the CUC Education Division is to prepare candidates for positions as elementary and secondary teachers. Program objectives are closely tied to students attaining diplomas and certificates prescribed by the MOE. The Bachelor of Science degree program in

Elementary Education offers two areas of concentration, a language arts/social studies combination and a math/science combination. A minimum of 128 credits are required for the program, including 44-46 credits in general education, 45 in professional education, 18 in a content specialization (e.g., language arts/social studies) and 19 credits (21 for women) in electives. Five of the 128 credits are awarded for one semester of supervised student teaching.

For both elementary and secondary fields, the majority of the professional education coursework is concentrated in the last two years. This coursework (including student teaching) accounts for 35 percent of the total credits in both degree programs.

Cuttington offers three degree programs: (1) the Bachelor of Science in Elementary Education, (2) the Bachelor of Science in Secondary Education with specialization in social sciences, language-literature or science-mathematics, and (3) the Bachelor of Science in educational administration. Students begin professional education courses after completing all college, divisional and some elective requirements. In the first semester of their sophomore year they take an introductory course in education before making a decision to formally apply for admission to the Education Division. After a screening process they may be admitted to complete their professional work. In total, the students must complete 89-91 credits within the major.

The curriculum at both institutions reflects a fairly traditional approach to teacher education that should be

reexamined in terms of the probable career paths of most graduates. Few BS graduates teach for more than one or two years before moving into administrative posts within schools or the government or into noneducation positions in the private sector. In light of current economic conditions, this trend is not likely to change in the next five to ten years.

Instructional leadership and management are appropriate alternative areas of concentration if graduates, within a year or two out of school, are in positions that involve the management of instructional personnel and resources. People with these skills are needed in the schools and individuals who have some teaching experience and leadership training could play an important role. The Cuttington educational administration major addresses this important need most directly.

What role the PEP will play in the university curricula is unclear. Elementary majors should be introduced to this instructional system within their preservice training. Students majoring in educational administration may be in a position to manage aspects of this program in school so they, too, should be familiar with the system. Currently this is not happening. There is presently no formal involvement of UL or CUC faculty in the PEP inservice teacher training program and the PEP methodology is not taught in either university-based teacher education program.

6.2.1.4 Examinations

Students who wish to enter either the University of Liberia or Cuttington University College must take a University Entrance and Placement Examination. This is a college-specific nonstandardized admissions placement test, intended to reflect the expectations of the respective campuses. No test reliability or validity data are available.

For regular admission to Teachers College, applicants must pass both sections of a two-part English and mathematics exam. For conditional admission, they must pass only one of the two sections and score at or above the 13th percentile on the second one. Approximately 80 percent of students admitted to the University of Liberia require remedial instruction before they begin their degree program. At Cuttington University College, students must pass three subcomponents--English, science, and mathematics. There is no conditional admission and no remediation for admitted students.

At both UL and CUC, examinations are given in individual courses, but there are no overall exams required at the completion of a students' program as a prerequisite to graduation.

6.2.1.5 Facilities and Equipment

Teachers College is located in the Tubman Hall and adjacent buildings on the University of Liberia campus. Two and three faculty share small offices. The library has few education books and no professional education journals. All facilities are in

need of maintenance. The Science Education Center is a laboratory that focuses on orienting elementary and secondary students to methodological approaches, adapting curricular materials, and making simple instructional materials and tools for use in the general science, biology, chemistry and physics curriculum of the school.

6.2.1.6 Costs and Donor Support

The estimated cost to GOL for a preservice education student is $1,061 per year. Hence, the GOL invests about $4,244 for each graduate, many of whom do not enter teaching, or do so for a short period of time. In addition, most graduates stay in the Monrovia area.

6.2.1.7 Quality of Instruction

No course evaluation data or follow-up data on students are available. Graduates of these programs appear to be highly employable but often outside the areas for which they were trained. Faculty report the lack of adequate resources for instruction, a condition which has implications for instructional quality.

6.2.2 Rural Teacher Training Institutes

Preservice, two-year programs are located at the rural teacher training institutes (RTTI) at Kakata and Zorzor.

6.2.2.1 Students

Applicants are required to hold a high school certificate,

pass a special TTI entrance examination administered by WAEC and be willing to commit two years to full-time study. Table 6.4 presents the number of TTI graduates from 1978-86. Enrollments dropped from 254 in 1982 to 38 in 1987, primarily due to the perception that incentives for teachers are inadequate and concern on the part of students that they will be able to secure a teaching position upon graduation. Extensive follow-up information on graduates is unavailable but one study suggests many do not enter teaching. A tracer study of 100 graduates of the RTTIs found that 25 were employed as teachers, 40 had applied for teaching jobs but were unable to secure them, 20 had taken other types of positions, and 10 had not sought employment of any type.

In response to the shrinking applicant pool, the RTTIs have relaxed their admissions standards. Some students have been admitted recently without a high school certificate. However, external efficiency has been lost as TTI graduates without high school diplomas are unable to be certified. In 1986, 26 of the 46 graduates of KRTTI could not produce high school certificates and have not yet been recommended for certification. MOE officials suggest that many of these students probably failed the Liberian National Examination (LNE), were admitted to the RTTI on a provisional basis, and then failed the LNE on the second attempt.

Table 6.4

Grade 'B' Teaching Certificate
Graduates from the RTTIs 1978 - 1987

Year	KRTTI	ZRTTI	Total
1978	99	-	99
1979	134	-	134
1980	148	-	148
1981	156	98	254
1982	208	46	254
1983	98	97	195
1984	98	102	200
1985	NA	NA	NA
1986	46	22	60
1987	29	9	38

6.2.2.2 Teachers

The RTTIs have a staff of 27 faculty, including four administrators. The highest degree held is the masters. Peace Corps volunteers and other expatriates hold some staff positions. Teaching effectiveness is hindered by frequent turnover and a lack of teaching experience.

6.2.2.3 Curriculum

Until 1976, KRTTI offered a three-year course for junior high graduates; in 1976, it began a two-year course B certificate for senior high graduates. The last three-year post-junior high trainees and the first two-year post-senior high trainees graduated in 1977. From 1975 to 1980, ZRTTI offered a one-year professional training course C certificate for senior high graduates who had not been trained as teachers but who had been teaching in the system. In 1980, all of these programs were abandoned and replaced by two-year programs leading to B certification for high school graduates only.

The two RTTIs now follow a similar curriculum. Eleven subjects are offered during a semester: mathematics, science, social studies, language instructional aids, classroom management, testing and evaluation, foundation of curriculum, and student teaching. The ZRTTI utilizes a credit hour system in the specification of course requirements as part of its campaign to facilitate transfer of its students into universities. The curriculum is assessed as 60 percent methods and education and 40

percent content area specialization. Though the PEP has been adopted as the national primary curriculum, RTTI faculty report they are involved only marginally in the implementation effort.

An eight-week student teaching experience is included in the second year. Students teach at the demonstration school on the campus or at one of the local schools. They are to be observed by faculty a total of 15 times during the eight weeks.

6.2.2.4 Examinations

Applicants must pass an admissions exam designed and administered by WAEC. Individual courses have examinations, but there is no exit examination.

6.2.2.5 Facilities/Equipment

Facilities and equipment for the RTTIs were expanded with funding from the first and second World Bank (WB) Education Loans and the first African Development Bank (ADB) Education Loan. Under WB1, $625,000 was provided for the expansion of KRTTI's academic, communal and boarding facilities. Such support was aimed at increasing student enrollments, expanding graduate output, adding an inservice component, and expanding the preservice offerings. As part of this financing, a demonstration school was built to accommodate 240 primary students. UNDP/UNESCO provided equipment and training in the use of radio in primary schools and closed-circuit TV in teacher training. The radio and TV components were never installed due to the withdrawal of UNDP funds because of financial problems.

A similar program of expansion was funded at ZRTTI under WB2 and ADB1, aimed at increasing the output of qualified teachers by recruiting women, replacing the three-year, post-junior high program to a shorter (one year) post-senior high program and by reorienting training content toward rural activities.

Construction of some new and renovation of some existing academic and boarding facilities, including the demonstration school, was undertaken. As it turned out, the one-year course was dropped at ZRTTI in favor of a two-year program and the addition of some junior high training.

6.2.2.6 Costs and Donor Support

Students pay $150 a year plus two bags of rice to attend the RTTIs. This covers tuition, room, and board. There are no additional charges for course materials.

6.2.2.7 Quality of Instruction

The RTTI programs have suffered from inexperienced instructors and high turnover rates. Students have been admitted who did not meet minimal criteria. No course or program student evaluation data are available. If RTTIs were to become junior colleges offering associate of arts degrees, the universities would require that curriculum revisions be undertaken.

6.2.3 Inservice Programs

During the early 1980s, two large-scale, inservice primary teacher training programs were conducted, CINSTEP, funded by the World Bank, and the IEL program, funded by USAID. While these

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projects have now ended, inservice primary teacher education is being continued under the Primary Education Project (PEP) funded by the MOE and USAID. Each of these programs is described below.

6.2.3.1 The MOE/World Bank Inservice Program

The MOE/World Bank inservice program, a five-year program funded by the Fourth World Bank Project, was created to upgrade the skills of 1,895 underqualified primary and junior high school teachers so that they could acquire C level certification. Housed at both the Teachers College and Cuttington University College, the program required participation in two eight-week seminars conducted during consecutive January/February school vacation periods, as well as one semester of a supervised practical teaching experience.

6.2.3.1.1 Students

A total of 633 students successfully completed the inservice program during 1986 and 1987 and applied for C certification (Tables 6.5 and 6.6). A final group is expected to complete the program in 1988.

The attrition rate for the first cycle of students (graduated in 1985) was 56 percent; for the second cycle (1986 graduates), 34 percent; and for the third cycle (1987 graduates), 26 percent. This suggests internal efficiency has improved as the program has matured. Nonetheless, student repetition in various phases of the program reduced efficiency. In 1985, 110

Table 6.5

Phase I, II and III Completers of the MOE/UL Program by Year*

	Began Phase I	Completed Phase I	Began Phase II	Completed Phase II	Completed Phase III
Jan. 1984	451	-	-	-	-
Jan. 1985	162*	99	271	195	-
Jan. 1986	340*	240	124	107	203
Jan. 1987			270	252	130
TOTAL:				454	333

Source: UL Final Reports on the In-Service Teacher Training Program, 1985; 1986; 1987.

* repeaters included

Table 6.6

Phase III MOE/UL Completers by County and Sex

County	1986 Sex M	F	1987 Sex M	F	Total
1. Montserrado	10	8	44	23	85
2. Bomi	5	0	20	0	25
3. Grand Bassa	12	9	5	9	35
4. Grand Gedeh	18	1	13	2	34
5. Grand Cape Mount	5	0	23	1	29
6. Grand Kru	13	4	3	2	22
7. Margibi	10	2	23	6	41
8. Maryland	17	2	11	1	31
9. Nimba	0	2	6	0	8
10. River Cess	7	0	5	0	12
11. Sinoe	5	0	3	3	11
Total:	102	28	156	47	333

students needed to repeat Phase I; in 1986, 83 students repeated. Repetition of Phase II has been low, less than three percent.

6.2.3.1.2 Teachers

At Cuttington, 27 individuals including education faculty and faculty from other divisions taught in the CINSTEP program. However, few UL faculty participated as instructors because the training site (Kakata) was too far from Monrovia for easy access. Two Ul faculty members did serve as instructional supervisors. Most CINSTEP instructors were hired from the outside. Table 6.7 shows the number, academic qualifications and subject areas of the instructors in the MOE/UL program.

6.2.3.1.3 Curriculum

The program involved three phases. Phase I, eight weeks long, focused on subject matter from seven subject disciplines. Phase II, also eight weeks long, emphasized instructional methodology. Phase III, lasting for one academic year, was the supervised observational period.

6.2.3.1.4 Examinations

Only course examinations were required.

6.2.3.1.5 Facilities and Equipment

The KRTTI was the site for the MOE/UL program. The lack of funds for transportation as well as poor road conditions during the rainy season reduced the amount of instructional supervision that could be provided for trainees.

Table 6.7

Instructors in MOE/UL Program Phase I or Phase II
by Qualifications and Subject Matter Specialization
for 1985-1987

Subject Area	1985	1986	1987
Number of faculty	24*	26	20**
Qualification			
Certificate/Diploma	0	1	1
Bachelors	9	14	7
MA	13	11	11
Ph.D.	0	0	1
Subject Area			
Language arts	4	4	4
Science	3	4	3
Social studies	4	3	3
Math	3	4	3
Ed Psych	4	4	3
Foundations	2	3	0
General Methods	2	2	3
Media	0	1	1

* Data on 22 available
** Data on 21 available

6.2.3.1.6 Costs and Donor Support

The total World Bank contribution from 1985-1987 was $706,494 for MOE/UL. The total World Bank contribution for the CINSTEP program was $1,200,000. Costs to GOL for this training (assuming no donor funding) would be $600-700 per person.

6.2.3.1.7 Quality of Instruction

Program evaluations were conducted after the 1985, 1986 and 1987 programs. While not employing identical items across the three years, the items focused on five areas: (1) organization and administration, (2) performance of instructional staff, (3) the courses of study, (4) the services and facilities, and (5) the most and least enjoyable aspects of the program. The evaluation report indicated "highly positive" ratings from participants across all five areas but did not present summary statistics.

6.2.3.2 LPEP Training Program

The goal of the MOE/USAID Liberia Primary Education Program (PEP), begun in 1987, is to introduce a specially designed instructional system consisting of programmed teaching materials, peer learning groups and appropriate conventional methods, including textbooks, to all public primary schools by 1992 (described more completely in Chapter 4). Liberia now has 158 school installations of the system, with 60 more scheduled for 1988. All primary schools will be included by the end of five years. To accomplish this task, a modularized training program

for teachers, principals and instructional supervisors is planned.

6.2.3.2.1 Students

For each of five years, one fifth of the primary teachers and principals in the country will receive training. By the end of 1988, 1,270 teachers will have received training. By the end of the project, more than 3,000 teachers and administrators will have been trained.

6.2.3.2.2 Faculty

Currently, the trainers for the PEP inservice sessions are classroom teachers and others who displayed distinction in the use of the IEL materials in their own schools. These individuals will both present the workshops and supervise teachers who are attempting to implement the system. A group of Peace Corps volunteers will also be trained to serve as trainers and instructional supervisors. Each one will be assigned five schools to supervise over a two-year period. Building principals, who undergo the same PEP training as teachers, will receive additional supervisory training from the project supervisors so they can assume the instructional supervision of this program.

6.2.3.2.3 Curriculum

The newly proposed training system has three separate sequences to accommodate the different levels of training and

certification of the more than 3000 primary teachers and principals targeted for training. The three proposed sequences:

1) For untrained teachers: a 10-week course, emphasizing sequenced learning materials and leading to C certification.

2) For teachers who hold certificates: a 4-week course, emphasizing sequenced learning materials.

3) For uncertified teachers who have had sequenced learning training: a 6-week upgrading course leading to C certification.

Supervision of teachers and principals will occur in each school after training. Principals will be trained to take over some of the supervisory function from Peace Corps supervisors and other project staff supervisors.

6.2.3.2.4 Examinations

No examinations are required in the training program.

6.2.3.2.5 Facilities and Equipment

Training will be held at the Booker Washington Institute and possibly the RTTIs. Twenty-four 4-wheel drive vehicles will be provided to Liberian instructional supervisors, as well as twenty-five motorcycles for transportation of Peace Corps volunteers.

6.2.3.2.6 Costs and Donor Support

The project is expected to cost $22,492,000, with USAID supplying $12.7 million, GOL, $7.5 million, and Peace Corps, $2.3 million.

6.2.3.2.7 Quality of Instruction

Project evaluators will collect formative evaluation data at early workshops to be used in making program revisions.

6.2.3.2.8 Integration of PEP with Other Teacher Training Activities

While the model of cooperation between the universities and MOE established by the CINSTEP program was effective, it has not been employed with PEP. The PEP is administered out of the MOE Bureau of Primary Education and current plans are for the project to operate independently of the four preservice training institutions. Consequently, the university and RTTIs are not well-linked to the PEP program. There currently are no plans to use faculty from these institutions as trainers or supervisors for PEP teachers. Moreover, students in the preservice courses are not receiving training on how to use the learning system. If students obtain teaching positions upon graduation, they will need to undergo the PEP training.

The Bureau of Teacher Education could facilitate cooperation among the Bureau of Primary Education, the universities and the RTTIs. Both elementary and secondary faculty could teach some courses within the PEP training sequence and could also train instructional supervisors. Without greater cooperation than currently is planned, the university programs will continue to have excess capacity and high wastage, and the PEP program will lose a valuable source of expertise in teacher education and instructional supervision.

Declining enrollments and the lack of graduates at the RTTIs signal the reduced demand for such programs in their current form. The market for RTTI graduates is bleak; unlike Bachelor of Science graduates, these students will not have easy access to administrative posts in the schools or high paying private sector positions. Yet, up to 40 percent of one of the graduating classes was unable to secure an entry level teaching position!

Some educators believe that the RTTIs should be converted to junior colleges (still emphasizing preservice education) so that students can obtain AA degrees and transfer credits to the university programs toward a BS degree. This argument ignores the demonstrated decline in interest in preservice degree level education that accounts for the drop in enrollments and graduates at both universities. Liberia needs more qualified teachers, but under current economic conditions this goal can be met more realistically using inservice rather than preservice as the vehicle for training. The RTTI facilities at Kakata and Zorzor might be used more appropriately to house Centers for Inservice Education which could promote the PEP training program as well as inservice training activities for secondary teachers.

6.2.3.3 Access and Equity

Access appears to be limited by both geographic location and gender of the potential student. Access to preservice education effectively is limited to a 300 mile radius around Monrovia, but this region is also the most populated. In light of decreased

enrollments at current sites, there is no reason to expand the number of preservice education sites. Males outnumber females in the current teaching force (4:1), in preservice education programs (4:1), and in all inservice programs (3:1).

6.2.3.4 Administration and Supervision

Articulation among the many actors in the teacher education enterprise has been and remains inadequate. The PEP training program, intended to involve all public primary teachers and principals in the country, operates autonomously from the two teacher preservice training institutions, Teachers College and Cuttington. The PEP instructional system is not taught in any of the university preservice courses. University faculty have been only minimally involved in the conceptualization of the national implementation plan for PEP.

A second example is the lack of coordination which has existed between the RTTIs and the universities. Students who graduate from the RTTIs must complete four years at the university to earn a BS degree despite having already completed two years of education coursework. The unfortunate conclusion is that the coursework at the RTTIs is substandard and not equivalent to university training. A proposal exists to upgrade the status of the RTTIs to junior colleges so they could grant an Associate Arts degree to allow graduates to transfer to Teachers College or Cuttington, respectively, without needing to repeat two of the four years of work. The RTTIs would then serve as feeder schools to the universities.

While this proposal has merit in theory, practical considerations suggest it may lead to an inefficient use of resources. First, the qualifications of RTTI faculty are weaker than those of the university faculty, which may contribute to a lower quality of instruction in the RTTIs. Second, the drop in enrollments and the low production of graduates from the RTTIs signal that preservice teacher education has become less attractive to Liberians. The further investment of resources in the existing RTTIs or proposed junior colleges must be questioned in light of the low level of interest in teaching.

A recent development that potentially could improve articulation among pre- and inservice programs was the creation in the MOE of the Bureau of Teacher Education under the Assistant Minister for Teacher Education. The Bureau now oversees the certification and accreditation processes. Directors of the RTTIs report to the Assistant Minister for Teacher Education. In the future, the Bureau should expand its functions. Staff should collect and analyze teacher data on an annual basis so accurate information is available on the number of teachers by grade level, qualifications, and type of school in which they teach. Staff should monitor all of the pre- and inservice programs in order to coordinate the use of personnel and resources to encourage cooperation and to avoid redundancy and waste. The Bureau should provide pertinent information to other divisions within the MOE. For example, the Bureau might ensure that the Bureau of Secondary Education is aware of the number and location

of schools using PEP so it can begin to prepare junior high teachers in those locations for the arrival of PEP-trained seventh graders. To the extent that the Bureau of Teacher Education can assist in coordinating the teacher education programs directed by other Bureaus and other institutions, redundancy and inefficiency can be reduced.

Instructional supervision has been highly touted but rarely implemented in Liberia. In preservice teacher training, instructional supervision refers to the observation of the preservice teacher by a faculty member during a period of practice teaching. At the inservice level, typically a supervisor observes an experienced teacher who is attempting to implement a new idea, approach or skill that he or she learned about in a course or workshop.

The costs associated with transporting the supervisor to the school site has been an obstacle to instructional supervision of any type. Although supervision is intended as a major function of the DEOs and CEOs, and although many of these individuals have been trained in supervision techniques, they cannot get to the schools because of a lack of vehicles and money for gasoline.

One response to this problem has been incorporated into the PEP. The PEP will provide funding for instructional supervisors. In addition, principals will be given some training in supervision as part of the PEP training program. Since principals already are located in the schools they can visit classrooms more frequently but for shorter periods of time (than

external instructional supervisors) and transportation costs are eliminated. Many principals have current teaching assignments, or at least have taught at one time, making them credible with their teacher colleagues. Finally, since they will have an opportunity to observe all of their teachers, principals should be able to develop a better grasp of the strengths and weaknesses of the teaching staff than could an external supervisor. To improve secondary teacher supervision, the REOs, CEOs and DEOs might be relocated within the secondary schools as principals, assistant principals or curriculum coordinators.

6.2.4 Secondary Teacher Training

Inservice education opportunities for secondary teachers have been less systematic than for primary teachers. Various divisions of MOE sponsor workshops and some donor funding (e.g., UNICEF) has been directed toward inservice education, but the efforts have been far less comprehensive than for primary teachers. At the secondary level, there is presently no systematic plan for inservice education and no donor-supported projects.

6.3 Analysis

6.3.1 Needs

The greatest needs in the teacher education subsector are (1) for improved incentives to recruit and retain qualified teachers, (2) to reduce the wastage and inefficiencies in the

existing preservice training programs, (3) to prepare inservice teachers at the primary level to effectively implement the PEP, and (4) to train instructional supervisors.

6.3.2 Plans

The national implementation of the PEP will involve the training of large numbers of primary teachers and principals at the inservice level. Elements of the CINSTEP certification program will be subsumed as a strand in the PEP program. Radio will deliver some aspects of this training. GOL currently is considering plans to phase out or modify the RTTIs.

6.3.3 Constraints

Severe financial constraints have dramatically reduced teacher incentives. Reductions and late payment of salaries, the failure to implement the established salary schedule, and lack of operating funds in the schools have lowered the morale of experienced teachers and discouraged others from entering the profession.

6.3.4 Issues

The loss of efficiency in the teacher training subsector results from (1) the failure of the system to produce sufficient numbers of qualified teachers for current and future needs, (2) the lack of teaching positions for qualified graduates due to economic constraints, (3) the exodus of many qualified teachers from the system, (4) the small number of preservice graduates relative to the size of staff and facilities in the four

preservice teacher training programs, and (5) the high rates of wastage caused by the failure to coordinate teacher education resources.

6.3.4.1 External Efficiency

The production of new teachers is falling far below the projected need, as illustrated in Table 6.8 which shows the projected primary teacher requirements for 1980-1990. Teacher demand in 1986 was estimated at 236, actual teacher output from the four training institutions in that year was less than 100. Enrollment declines of 27 percent at the primary level since 1982 should reduce teacher demand somewhat. However, successful implementation of the PEP is expected to result in better instructional quality. As parents recognize this improved quality, enrollments are expected to increase.

Teacher training needs projected to 1991 are offered in Table 6.9 for teachers at the primary, junior high and senior high levels. These are estimates of new teachers needed in the system, assuming no attrition and constant student/teacher ratios, and thus are very conservative. Actual requirements are likely to be much higher if participation rates in schools do not continue to decline, as they have been for the last six years.

Projections are offered for three possible levels of annual growth in school populations: 3 percent, 5.5 percent and 8 percent. The three percent level was selected to illustrate requirements for growth in school population matching the

Table 6.8

Levels of Qualification of IEL Teachers

QUALIFICATION	NUMBER OF TEACHERS	PERCENTAGE
BSc. Edu.	11	1.5
A Certificate (Ghana)	3	0.4
B Certificate	187	25.9
C Certificate	227	31.4
H.T.C. (Ghana)	1	0.1
G.T.C. (General Teaching Cert.)	4	0.6
CINSTEP (C equivalent)	17	0.4
Math. Edu. (UL)	3	0.4
		67.2
Underqualified Teachers		
1-3 yrs. College Edu.	13	1.8
G.C.E. (Ghana)	10	1.3
High School Certificate	225	31.2
Home Econ. Certificate	6	0.8
Army Volunteer	1	0.1
Under High School	14	1.9
		32.8

Source: IEL Project Implementation Unit

Table 6.9

Ten-Year Teacher Training Needs Based on Three Estimates of Teacher Demand 1/, 2/

Growth Level	Projected Rates of Teacher Demand 3% Prim.	3% Jr. High	3% Sr. High	5.5% Prim.	5.5% Jr. High	5.5% Sr. High	8% Prim.	8% Jr. High	8% Sr. High
1982	157	74	35	287	136	64	417	187	93
1983	161	76	36	303	143	68	451	213	101
1984	166	79	37	319	151	71	487	230	109
1985	171	81	38	337	159	75	526	249	118
1986	176	83	39	356	168	79	568	269	127
1987	181	86	41	375	177	84	613	290	137
1988	187	88	42	396	187	88	662	313	148
1989	193	91	43	417	197	93	745	338	160
1990	198	94	44	440	208	98	773	365	173
1991	204	97	46	465	220	104	834	395	186
TOTAL:	1794	849	401	3695	1746	824	6046	2859	1352

1/ No allowance for attrition; constant student/teacher ratios of 30:1 at primary, 14:1 at junior high, and 19.1% at senior high; base 1981 teachers projected from 1978 survey at 8% per year, giving 5,218 at primary, 2,468 at junior high, and 1,166 at senior high.

2/ Annual output of teacher training institutions roughly 250 at the primary level, 50 at junior high, and 30 at senior high. (Source: MPEA Working Papers)

Source: 1983 Sector Assessment.

expected growth in the general population, meaning no effective change in enrollment ratios. The eight percent level was selected to show requirements if the rate of expansion seen through 1982 were to continue. Finally, the 5.5 percent level was selected to show requirements midway between the other two.

The present system of teacher education can meet only the most conservative projection for new teachers over the next ten years--one that assumes no increase in the percent of Liberian children who attend school and a constant student/teacher ratio. If allowances are made for attrition, the present system will not be able to meet teacher demand even under the most conservative projection of enrollment growth.

The projections for 5.5 percent and 8 percent growth are striking. For a 5.5 percent growth over the next ten years, the system must produce 3,695 primary, 1,746 junior high, and 824 senior high teachers. For a growth rate of eight percent, the corresponding numbers of teachers required are 6,046, 2,859 and 1,352, respectively.

Even if trained teachers were somehow to become available, the cost for expansion of the present system with constant student/teacher ratios would be prohibitive. It is apparent that more efficient use will have to be made of existing resources if growth is to be accommodated with available funds.

6.3.4.2 Internal Efficiency

Wastage at the preservice level is increasing. For 1984-86, entering class sizes were as large as 255, graduating class

sizes as small as 17. In 1986 there were 40 percent fewer graduates than in 1985 (Table 6.1). While the number of graduates has decreased, however, the size of the faculty has remained relatively constant. Similar decreases in enrollments and graduates can be seen at the two RTTIs. There were 85 percent fewer graduates in 1987 than in 1982.

The reasons why students do not enter or persist in teacher training programs are well known to faculty and MOE officials. The lack of incentives is a major cause; other fields pay higher salaries and allow for greater upward mobility. Further, once students graduate they are not assured of a teaching position. Upon graduation, prospective teachers may face a six to twelve month delay in getting a job and some will not secure a teaching position at all.

Despite the decreased student population, the four preservice programs continue to operate with about the same level of resources as before. Faculty size and operating budgets have not been substantially reduced. Some faculty time has been diverted to the two CINSTEP programs, helping to reduce some of the inefficiency. This program will end in 1988, and it is not clear whether (or how) faculty and resources from the four programs will be involved in the PEP training.

The inservice programs generally have been more efficient than preservice programs. The CINSTEP program graduated 633 students by December 1987, with a last round of students scheduled to complete and apply for certification in 1988. The

attrition rate was initially high but slowed down over the course of the program. For the first cycle of students at Teachers College (1985 graduates) the attrition rate was 56 percent. Efforts to address a series of problems identified through an evaluation conducted by UL faculty appear to have been successful since attrition for the second cycle of graduates (1987) dropped to 26 percent and repetition rates for Phase II dropped to less than three percent.

The PEP program offers even better safeguards against attrition than the CINSTEP program. Because PEP will be implemented in all primary schools, participation in training will be mandatory, not voluntary. Further, entire schools will convert to the PEP, so peer pressure, as well as administrative pressure, to complete the training will be strong. Instructional supervision will provide follow-up support for teachers who have completed training and should help bridge the time between training sessions. For many teachers, the added incentive of becoming eligible for C certification is another reason to complete the training.

6.3.5 Conclusions

Conclusion 1. Internal efficiencies at all four preservice educational institutions are declining. Rechanneling some preservice education capacity into inservice would improve internal efficiency.

Conclusion 2. Given the projected shortfall of teachers, both pre- and inservice teacher education are necessary. However, inservice education must be a higher priority for resource allocation than preservice education because so many members of the teaching force are unqualified for the role and because preservice education does not necessarily yield graduates who go into teaching.

Conclusion 3. Current instructional supervision in the schools is inadequate. The need for an effective system of instructional supervision at the building level is immediate; without such supervision, gains made by inservice training are likely to be short-term only.

Conclusion 4. Coordination and cooperation among the various teacher education programs and institutions is inadequate.

Conclusion 5. Current data collection, analysis and reporting mechanisms for teaching force data and teacher education program data are inadequate.

Conclusion 6. The failure to provide the most basic incentives for teachers has reduced the morale and productivity of the current teaching force and sent a sharply negative message to individuals who might otherwise consider a career in teaching, thus reducing the number of people who enter and complete preservice and inservice training programs.

6.4 Recommendations

Recommendation 1. Convert the RTTIs to Centers for Inservice Education.

Because there are few incentives to attract individuals into teaching, the prognosis for even modest increases in the pool of preservice applicants who are high school graduates is bleak. The wastage at the RTTIs represents an unacceptable situation given the current and projected financial difficulties at GOL.

An alternative use of these facilities would be as Centers for Inservice Education. Anchored by the resources of the PEP, these centers could perform the following functions:

1) Serve as the training facilities for the various strands of inservice training needed for the PEP national implementation. The current staff of PEP inservice trainers would be augmented through the use of the staff from the two RTTIs;

2) Serve as a facility for the training of instructional supervisors.

3) Serve as a facility for inservice training for secondary teachers.

Recommendation 2. Train principals to be instructional supervisors.

Instructional supervision is inadequate at the school level. Currently, a major obstacle that prevents effective instructional supervision is the assumption that it must come from outside the school itself. District and county education officers are expected to perform these functions but rarely do, due to inadequate resources and lack of supervisory training.

The content of an instructional supervision training program would include the administration of local resources (such as student registration fees), the recording and reporting of pertinent data, the overseeing of the instructional programs, and the development and management of the teaching staff. In particular, the PEP will require extensive instructional supervision capacity as it is implemented nationally. Each of the functions described above will need to be carried out to ensure that once classroom teachers have received initial training, they can apply what they have learned within their own classrooms. The PEP materials will need to be inventoried and distributed. Reports of student data must be sent to the MOE. Problems that arise will need to be identified and addressed with PEP officials.

The staff of both UL and CUC could be used to design and deliver this training, much as they were involved in the management and delivery of CINSTEP. Staff from the RTTIs could be used as instructors in the program. The LRCN might also contribute to the training through programs that offer advice and training on such issues as observing teacher performance, filling out data reporting forms, and handling difficult personnel problems.

The current plan to train PEP supervisors might be the starting point for a broader program of training that would involve secondary principals. In order to make such a plan work, (a) job descriptions for principals must be written that include

the instructional supervision responsibilities; (b) a training program must be designed and piloted; (c) appropriate incentives must be identified; and, (d) methods of accountability must be determined. Strong school principals at both primary and secondary levels are needed to facilitate instructional programs.

Recommendation 3. Use existing elementary faculty at the universities to help plan and deliver the programs at the Centers for Inservice Education.

Due to the low enrollments in the UL preservice teacher training programs, UL faculty presently are underutilized. These faculty could be used to design and deliver inservice teacher education. The temporary rechanneling of some of the workload of elementary faculty from preservice work to the inservice centers for a 4-5 year period would provide valuable resources to the Centers and prevent further inefficiencies and wastage at Teachers College.

Recommendation 4. Create data collection, reporting and analysis procedures that will provide information about the size and quality of the preservice and inservice teaching force.

A 1985 data summary from the MOE indicated there were 5,583 instructional staff, but it did not provide a breakdown of the types of roles included under that category. A 1987 MOE study reports there are 8,310 public school employees. Such discrepant figures highlight the critical need to monitor the size of the teaching force. Information about teachers is only one component

of a much broader data set needed before an accurate assessment of the status of teachers can be made. The characteristics of the teaching force must be analyzed in terms of level of formal and informal training, certification, years of experience, subject matter expertise, size and level of school, size of community, and grade levels taught.

Recommendation 5. Further clarify the role of the Bureaus of Teacher Education, Primary Education, and Secondary Education in the MOE as they relate to teacher education.

Diminishing resources demand that the teacher training subsector be as efficient as possible. Administrators must monitor input and output of programs in looking for ways to stretch personnel and resources and to reduce wastage and redundancy. Because all three will be responsible for some aspects of teacher education, further clarification of the unique responsibilities of each, as well as their shared responsibilities, is necessary.

Recommendation 6. Ensure that teachers' salaries are paid on time.

Teachers must be paid on time. Without a continui commitment on the part of the Government to this fundamental goal, other efforts to improve the quality of the teaching staff may fail. Some of the repercussions of delayed payment are obvious; others are more subtle. The delays in salary payments hinder attempts to recruit and retain qualified teachers. Some

teachers have found it necessary to hold a second job. Teacher absenteeism rates have been estimated as high as 22 percent.

A less obvious repercussion of the salary delays is that unhealthy expectations about work habits are established in the minds of teachers. Teachers who have taught only a few of the eligible days in a month are paid for the time they missed. Once these work patterns have been established, they may be difficult to change.

7.0 VOCATIONAL/TECHNICAL EDUCATION

7.1 Status

Vocational education is aimed at the development of required skills at the low to middle level of various trades and crafts. Technical education is aimed at the development of higher level skills, appropriate to working at the technician level. Vocational training has typically been offered at secondary, out-of-school, or post-high school institutions, while technical training has typically been offered in college level programs leading to A.A. degrees or certificates.

The recent history of VTE in Liberia includes substantial efforts to improve and expand programs and institutions. In 1971, the MOE reported five existing or planned VTE programs in Liberia: Booker Washington Institute (BWI) and Liberian-Swedish Vocational Training Center (LSVTC), a center operated by Bong Mines, a Basic Craft Training Center in Bomi County, and a proposal for a technical college at Tubman Town in Maryland County. Descriptions of private or proprietary programs which may have been in operation then are not available. Since then, the GOL has committed substantial funds to VTE development and outside donors have invested over $6 million in VTE projects. There are now over 27 programs receiving government support, a steady emergence of new proprietary programs in specialized areas, and over 7,000 persons involved in formal VTE of some kind.

Over this period of growth and change there have been three major developments which have important consequences for VTE. Since 1980, the government has taken active steps to coordinate and monitor VTE at the national level. Through PRC Decree No. 56, the Government restructured the National Council for Vocational/Technical Education and Training (NCV/TET) and added the Agricultural and Industrial Training Bureau (AITB) as its secretariat and administrative unit. The AITB was given broad powers to regulate and monitor all phases of VTE. Since its inception in 1981, the AITB has undertaken a number of activities which have significant implications for the potential future of VTE. These actions include creating a mechanism for establishing national standards for occupational skills and training, a testing and certification process for applying those standards, and a procedure for reviewing and accrediting VTE programs. These are discussed below.

A second development has been the major involvement in and then withdrawal from Liberian education by external donors, especially the World Bank (WB). Over the course of four major projects (WB1 through WB4) from 1972 through 1984, the World Bank allocated over $5.4 million (in constant 1972 dollars) to VTE projects. An additional $2.5 million was planned for a Clerical, Business, and Domestic Training Center to be constructed beginning in 1985, but the plan was canceled. A major VTE effort of USAID was the Rural Development Institute (RDI) at Cuttington University College. This institute was designed to produce high

level agricultural technicians and extension agents after a two-year college level program. The RDI was successfully constructed and operated for four years, producing over 150 graduates. However, the agricultural sector could not absorb most of them, leading to USAID's decision in 1987 to phase out the program. This growth and decline of funding has left a large investment which the GOL will not be able to support due to the stagnating economy.

The third development has been the general decline in the national economy. The economic situation has had two serious effects: (1) GOL revenues have fallen--resulting in a reduced ability to supply and operate VTE programs, and (2) the economy has been unable to absorb much of the output of the programs. Thus, even though the GOL has taken steps to rationalize and improve VTE, the context has become increasingly troublesome.

7.1.1 National Goals and Strategies

A comprehensive statement of goals for VTE can be found in the MOE's 1978-1990 Plan. These particular educational goals are closely linked to the GOL's major policy objectives of economic growth, Liberianization of the economy, and greater diversification. The education goals are:

- to develop the manpower base for active participation in, and stimulation of, the economic advancement of the country;
- to rapidly produce the number of trained workers needed to reduce the nation's excessive reliance on expatriates in middle level and skilled occupations; and,

- to instill in Liberian youth [appreciation for] the dignity of labor and the need to achieve individual self-reliance.

The GOL addressed particular goals for VTE in its Second Four-Year National Socio-Economic Development Plan, 1981-85:

- the promotion and creation of industrial and commercial employment opportunities, with priority given to labor-intensive small-scale enterprises of Liberian nationals...;
- on-the-job training programs for managerial, professional, and technical positions; and
- the strengthening of technical and vocational training, by continuing along the lines begun with the setting up of the National Council for Vocational/Technical Education and Training (NCV/TET) and the Agricultural and Industrial Training Bureau (AITB).

The 1984 National Policy Conference on Education and Training produced a related set of statements that included:

- that Vocational/Technical Education and Training has a definite place in the Liberian Educational System as provided by the Educational Act published in March of 1976;
- that Vocational/Technical Training should begin at grade 10;
- that skilled workers be trained at the secondary level, technicians at the postsecondary level, and engineers at the college or university level;
- that the existing training centers for industry should be reorganized so that they become complementary to one another and fit into a nationally integrated system. All new industrial training courses proposed should be subject to the review and approval of NCV/TET.

These general goals are translated into more specific goals for the VTE system in the MOE 1976-1990 Plan. In particular, the plan calls for actions which will:

- change attitudes which consider manual/technical work as undesirable;
- integrate VTE with the educational system;
- establish training standards and policies;
- obtain better teaching staff for VTE;
- advertise the advantages and opportunities available through VTE.

The plan also calls for expanding BWI to 1,500 students with 400 graduates per year, and a ratio of 60 percent practical to 40 percent academic material in the curriculum. There is also a plan for Lebanese community support of the establishment of the Commercial and Domestic Training Center.

7.1.2 Structure

The organization and control of VTE in Liberia is diverse. There is no single operating authority or consistent organizational type--nor is it argued there should be. Instead, there is a single coordinating and oversight board at the national level: the NCV/TET. Its mission, broadly defined in PRC Decree No. 56 (1981), is to promote balanced and unified VTE policy; study manpower and training needs and trends; strengthen training institutions through developing guidelines, procedures, standards and testing procedures; and monitor programs. The AITB is its administrative and oversight arm. This broad jurisdiction overlaps more than a dozen other governmental and private operating authorities, including the Ministries of Education, Youth & Sports, and Public Works, the Liberia Institute for

Public Administration (LIPA), and the Monrovia Consolidated School System (MCSS), and the governing boards of BWI, Wm. V.S. Tubman College of Technology (WVSTCT) and Tubman National Institute of Medical Arts (TNIMA), as well as the mission and proprietary schools.

There are three basic mechanisms through which a VTE program obtains operating authority:

1) It is created by or absorbed into an existing Ministry or Agency of Government. This category includes: Monrovia Vocational Training Center (MVTC), Wm. V. S. Tubman High School (WVSTHS), Eugenia Simpson Cooper Secretarial School, and others.

2) It is created as a semiautonomous institution by a charter from the Legislature or Executive Order. This category includes: LSVTC, BWI, and Liberia Opportunities and Industrialization Center (LOIC).

3) It is created by a private individual or group and receives a permit or certificate to operate from AITB. This category includes, for example, the Arthur Barclay Technical Institute (ABTI), the College of West Africa (CWA), Morning Star Typing School (MSTS).

Several other private or proprietary programs are in operation pending review and certification by AITB. Under existing NCV/TET guidelines all programs offering VTE must obtain such certification. This requirement has considerable potential to bring the NCV/TET into direct conflict with other government agencies and private organizations. There have been no reports of serious problems, but the potential remains.

VTE activities also differ according to their base of operation. They are distinguished by the degree to which they are organizationally linked to the employment sector for which

they prepare students. Those most closely linked are either operated by an employer, or maintain on-the-job training or apprenticeships as a major element of the program. A second category includes specialized training organizations which have programs designed for one or more specific occupations. There are school- or college-based programs which have significant vocational or technical training elements but also offer academic subjects. Table 7.1 shows VTE organizations by type and source of control.

The variety of different types of program and sources of control is striking. At least four different GOL Ministries or Agencies are involved, along with the governments of four other countries. The Governments of Gambia, Ghana, Nigeria, and Sierra Leone support the West African Insurance Institute, and the Mano River Union includes Liberia and Sierra Leone.

The MOE does not have a major involvement in programs outside of the LSVTC and the Home Economics Center (the latter now closed). The Ministry of Youth and Sports concentrates on job-related programs for out-of-school youths. The major school-based efforts at BWI and WVSTHS are under separate controls; BWI under a board chaired by the Vice President of Liberia, and WVSTHS is part of the MCSS. The private sector accounts for the largest number of institutions and the largest proportion of enrollments.

Funding arrangements show considerable differentiation. Some government support is provided for the majority of the

Table 7.1

Vocational/Technical Education Activities
by Type and Source of Control

Control	Type: Employer/Job Linked	Specialized Non-School	School Based
MOE		LSVT**	
MYS	MVTC* YOJT* BDOT* LOIC**	NYTC**	
MCSS WVST**			
LIPA		ESCS* NCTI*	
Other GOL	PWRM*	TNIM*	BWI*
Other Govt's		MRUC** MRUF** MRUM** WAII** MRUT**	
Mission		ABTI** MC** ZA SMAT**	JRR**
Proprietary	BVTC FI LECT	CBS IPS NSAT CCPM** LCI** OCC CCTC** LSES** RISS CPCA MCTC** SMCI CWA** MSAT VETC GLCI MSTS IMA MASE NAVI	

Notes: * full government financing
** partial government financing

(see attached list for abbreviations)

TABLE 7.1 (continued)

Abbreviations of VTE Organizations
Used in Table 7.1

CODE	NAME
ABTI	Arthur Barclay Tech. Inst.
BDOT	Busn. & Domestic Occ. Train. Cent.
BMVT	Bong Mines Voc. Train. Cent.
CBS	College of Business Studies
CCPM	City Comml. Pennah Mem. Inst.
CCTC	City Comml. Train. Cent.
CPCA	Church of Pentecost Comm. Inst.
CWA	College of West Africa
ESCS	Eugenia S. Cooper School
FI	Firestone Institute
GLCI	Gar Lour Comml. Inst.
HEC	Home Economics Center
IMA	Inst. of Management and Accountancy
IPS	Inst. of Prof. Studies
LCI	Lincoln Comml. Institute
LECT	Lib. Elect. Co. Train. Center
LOIC	Liber. Oppty. Indust. Center
LSES	Leigh Sherman Exec. Secy. Inst.
LSVT	Lib-Swedish Voc. Train. Center
MASE	MASE Comm. Institute
MC	Monrovia College
MCTC	Modern Comml. Train. Center
MRUC	Mano Riv. Union Customs, Excise, Trades
MRUF	Mano Riv. Union Forestry Train. Inst.
MRUM	Mano Riv. Union Marine Train. Inst.
MRUT	Mano Riv. Union Telecom. & Postal Inst.
MSAT	Monrovia Sch. of Appl. Tech.
MSTS	Morning Star Typing Sch.
MVTC	Monrovia Voc. Training Cent.
NAVI	National Academic & Voc. Inst.
NCTI	National Cler. Train. Inst.
NSAT	Nanlinda Sch. of Appl. Tech.
NYTC	National Youth Train. Center
OCC	Opportunity Comml. Center
PWRM	Pub. Works Road Maint. Cent.
RISS	Royal Inst. of Secy. Science
SMAT	St. Mary's Agr. Train. Center
SMCT	St. Martin's Comml. Inst.
TNIM	Tubman Ntnl. Inst. of Med. Arts
VETC	Vahun Ecological Train. Cent.
WACS	West Africa Comp. Sci. Inst.
WAII	West African Insurance Inst.
YOJT	Youth OJT Training Cent.
ZA	Zion Academy

organizations (27 of 47), amounting to a total budget allocation of over $200,000 in 1987. An accurate estimate of actual budget disbursements is not available. Many of the proprietary organizations receive subsidies. While the GOL appears to have made a substantial budgetary commitment to VTE, little of the budgeted amount is disbursed. Most of the schools contacted report receiving little or none of the budgeted funding.

7.1.2.1 Students

Participation by students in VTE programs ranges from a few hours a week in part-time evening study to full-time enrollment in a residential program. At some level of participation, there are approximately 7,000 students currently involved in VTE programs. The most recent available estimated enrollments and number of graduates from VTE institutions are detailed in Table 7.2. This section summarizes the overall patterns.

The table shows that there were substantial enrollment increases in industrial arts, engineering trades, and bookkeeping over the four years shown. Decreased enrollments are seen in business education. The engineering, manufacturing, and building trades show the steadiest growth. Growth in this part of the program is consistent with the plans and goals announced for this time period, namely to build Liberian manpower for the industrial and technical sector of the economy. However, these enrollment statistics should be viewed with caution. The reports from which they are taken note the poor state of record keeping and

Table 7.2

Vocational/Technical Enrollments & Graduates

	1979		1980		1981		1982		1985
	Enrollment	Graduates	Enrollment	Graduates	Enrollment	Graduates	Enrollment	Graduates	Enrollment (Proj.)
COMML. TRADES									
Accounting	570	181	563	166	834	220	692	182	358
Bookkeeping	224	56	126	21	485	120	522	84	99
Clerk/Typist	637	149	703	152	624	237	754	102	0
Secretarial Science	469	85	499	202	680	242	502	113	275
Business Education	208	59	290	76	212	43	161	37	63
TOTAL:	2108	530	2181	617	2835	862	2631	518	795
AGRICULTURE									
Agricultural Technician	83		185		150		85		
General Agriculture	570		579		509		468		
TOTAL:	653	111	764	147	659	421	553	150	162
ENGINEERING & BUILDING TRADES	994	n/a	1209	n/a	1456	n/a	1532	n/a	443
HOME ARTS	1008	409	1122	522	1347	529	577	41	81
INDUSTRIAL ARTS	n/a	n/a	920	42	1020	862	1414	74	165
TOTALS:	4763	1305	6196	1881	7317	3536	6707	1289	1646

reporting in many of the institutions covered. There are also no systemwide statistics for 1987, so current enrollments may differ significantly from those reported here. The lack of annual, systematic data collection is a serious problem as is discussed later.

7.1.2.2 Teachers

The staffing of VTE activities is a significant concern. Those who have studied and worked in these programs over their recent history consistently refer to the lack of adequately trained teachers. They point out that there are no functioning preservice or inservice training programs for VTE faculty. They also point to the relatively high proportion of non-Liberian faculty in many subject areas and institutions. Thus, there is cause for concern, even though there is a lack of detailed data to document the extent of the problem.

The best available description of VTE faculty by qualification is from a 1981 survey (Table 7.3). As expected, there is a wide variation among the programs in terms of the degree of qualifications of faculty. The subjects taught require different levels of academic training. The proportions of faculty at each degree level are shown more clearly in Table 7.4. Engineering and Agriculture have identical distributions of faculty degrees: 40 percent B.A. and above, 15-20 percent post-B.A. Commercial subjects have an equal distribution--almost exactly half of the faculty B.A. and above. Home arts and the

mechanical building trades have similar proportions of diploma and certificate faculty (about 75-80%), but with no post-B.A. faculty in the home arts. (Industrial Arts has only one teacher represented.)

This examination of the degree levels of VTE faculty does not reveal serious deficiencies. It does reveal all teaching ranks with significant proportions of teachers with only diploma or certificate levels of training. But for many building or mechanical trades, as well as secretarial and clerical duties, higher levels of education are not necessarily required. What is more important is the instructors' skill level and experience in the trade or job. This information apparently is not collected or reported. It may also be a cause of concern that many VTE faculty lack specific training in the pedagogical skills needed for their subject area. This would not be reflected in their degree level, and could be a topic for inservice programs or counterpart assistance.

7.1.2.3 Curriculum

The VTE programs available cover a wide range of subjects with major concentrations in a few areas. The largest number of programs is in the secretarial, clerical and bookkeeping areas (although most of these programs mention accounting as well, the level of education required for entry strongly suggest this is not accounting in the usual meaning of the term). These courses of study are found predominantly in the private and parochial

Table 7.3

Qualifications of VTE Faculty
by Major Area of Instruction

	Degree				
	Doct.	Mast.	Bac.	Assoc.	Cert./ Dipl.
Commercial Trades	0	18	61	20	56
Engineering	1	4	6	5	12
Mechanical & Building Trades	0	4	12	18	123
Agriculture	1	7	13	10	24
Home Arts	0	0	3	0	8
Industrial Arts	0	0	0	1	0

Table 7.4

Percent of VTE Faculty by Degree Level
and Major Area of Instructions
(1981 data)

	Degree					
	Doct.	Mast.	Bac.	Assoc.	Cert./ Dipl.	N
Commercial Trades	0	12	39	13	36	125
Engineering	4	14	21	18	43	28
Mechanical & Building Trades	0	3	8	11	78	157
Agriculture	2	13	24	18	43	55
Home Arts	0	0	27	0	73	11
Industrial Arts	0	0	0	100	0	1

institutions. The programs vary from a low of 18 months to a high of three years of part-time study.

The other major concentration of programs is in the building, manufacturing, and repair trades. These include carpentry, electricity, electronics, masonry, plumbing, auto and mechanical repair, and drafting. A small number of programs offer metalworking and machining also. These programs range from short basic courses of 16 weeks to some of four years in duration. These programs are more likely to be found in the government controlled and job related institutions.

A few institutions offer more specialized programs. The Mano River Union programs cover (1) Customs, Excise and Trades, (2) Forest ranger and forestry, (3) Merchant marine, and (4) Telecommunications. Four other agriculture programs are available. There is one computer science program in the proprietary sector, and higher level technical programs in Mechanical, Architectural and Electrical engineering, and medical specialties (nursing, paramedic, physician's assistant). The remaining programs cover home economics and domestic subjects.

There are some areas which are notable by their absence. Although clothing manufacture is a major part of local industry, there is very little formal training in that area. There is very little in retailing, marketing, advertising, or printing and graphics.

7.1.2.4 Examinations

One of the major efforts of the NCV/TET and the AITB has been the development of national standards and testing procedures for vocational skills and training. This effort has produced a set of published trade training standards in six areas (all at the basic level):

1. Carpentry and Joinery
2. Auto Mechanics
3. Electronics
4. Masonry
5. Domestic Electricity
6. Plumbing

Trade training standards at the advanced level are the next step. The AITB has also empaneled a National Agricultural Advisory Committee to develop standards for training in that area. Trade Training Standards were developed by teachers and experts on six Trade Test Development Panels. Testing procedures and regulations are in draft form and await approval of the NCV/TET. It is reasonable to expect that the testing procedures will be in place and functioning in some areas during 1988.

The tests will be used, according to the plan, for certifying the skill levels (Basic or Advanced) of VTE graduates. If successful, the use of these tests will assure employers of the competence level of prospective employees as well as serve as a basis for training program curricula.

As of this writing, no other standard examinations or testing procedures exist. Each of the separate programs applies their own methods of evaluation. There is no testing data base available to describe or compare the validity or results of the current programs.

7.1.2.5 Facilities and Equipment

Many of the more serious problems in VTE described by those in the field involve inadequate facilities, equipment and teaching materials. This is, in fact, a central area of difficulty in VTE in both developing and industrialized countries. Many subject areas require specialized and costly equipment and comparatively expensive materials which raise expenses far above those for other courses. Moreover, equipment used in the workplace is constantly subject to change and development, making it even more costly for VTE programs to stay well equipped. Thus, even under favorable circumstances, it is difficult for many VTE programs to maintain adequate physical resources for instruction. In the financially constrained circumstances of many schools, it has become virtually impossible.

In areas, such as typing and clerical skills, where equipment may be less expensive, programs report serious shortages and deterioration of equipment. For example, the 1986 report of the National Clerical Training Center and the Eugenia Simpson Cooper School states:

> These training institutions are in dire need of modern typewriters, adding machines and other training materials that would enable them to do effective training. Presently, they are operating below standard as a result of old and out-moded equipment....

This problem is critical to the planning of VTE and must be addressed in any strategy for improvement.

The location of facilities is also an important concern. To be efficient, they must be located where they provide easy access for students to classroom or shop instruction and to the relevant employment sector. The location of agricultural programs in Central Monrovia would be ill-advised, as would industrial or trade programs in most rural areas. The recent move of the LOIC to Monrovia, resulting in a significant reduction in training costs, is an example of the effects of location. The location of BWI's industrial, trade and commercial programs at a considerable distance from the centers of these activities in Monrovia is a related concern taken up in detail below.

7.1.2.6 Costs and Donor Support

The unit costs of VTE are directly related to the subject of instruction and the organization of the program. The part-time evening programs in clerical and commercial trades charge fees of $30-$70 per month, or $6-$15 per class. This could translate to annual costs of $360-$800. Most of these programs receive little if any GOL subsidies.

The full-time day programs involve much higher costs. They support full-time faculties and staff, more extensive facilities,

and usually more expensive equipment and materials. The annual cost estimates for these institutions range from approximately $1,000 per student in the mission schools to over $2,000 per student in BWI, LOIC, and MVTC. These wide differences in costs appear to be the result of boarding fees and higher salaries in some programs. One of the lower unit costs was reported for AETI, which specializes in Commercial and Construction trades: approximately $860 per student--this school was noted as one of the best managed of the PVOs studied under a 1987 USAID project. The lower costs may be closely related to managerial efficiency.

The highest unit costs are found in the residential, high-level, specialized programs, such as West African Insurance Institute (over $6,000); the Mano River Union programs ($3,000-$4,000) and medical training at TNIMA (over $3,000). The Mano River Union and TNIMA programs have reported the same problems of inadequate facilities, equipment, and supplies as have the trade programs.

There are four major oversight and administrative agencies involved in VTE: The Ministries of Education, and of Youth and Sports, the NCV/TET (with AITB), and the Liberia Institute of Public Administration. The entire budget of the NCV/TET and AITB can be considered as a VTE expenditure, since that is its mission. This amount is reported as $65,943 in the 1986-87 GOL appropriation budget for the AITB. The Bureau of Professional and Technical Education in the MOE is budgeted for $330,557 (1987) for supervision of Home Economics and programs in WVSTHS

and LSVTC. The MYS budget for its related supervisory activities is $174,929 (1987). The LIPA operates the National Clerical Training Center and the Eugenia Simpson Cooper School. Staff and supervision costs related to this part of the LIPA operations are reported separately as $36,854. Taken together, the GOL allocated over $600,000 to VTE supervision and administration in the 1986-87 budget.

The World Bank has made substantial contributions to the development of VTE under its Second, Third and Fourth Education Projects (WB2, WB3, WB4). The WB2 effort included $50,000 for planning the Mano River Union Forestry Training Institute, and $158,000 to help establish the NCV/TET. These projects began in 1977 and continued under WB3 in 1978-81. Construction, equipment, furniture, and technical assistance for the Mano River Institute received $1.34 million. The Third Project allocated $330,000 to building construction and $126,000 for staff training fellowships for AITB. The MVTC construction and staff training was supported by $1.85 million from the Third Project as well. An additional $882,000 in construction, equipment and staff development support was allocated to MVTC under WB4, and $430,000 to AITB for equipment, library, technical assistance and staff fellowships. All together, these three World Bank projects committed over $5.1 million to VTE between 1977 and 1985.

An additional $2.53 million in a construction and staff development project was planned under WB4 but never begun. It was intended to consolidate the Eugenia Simpson Cooper

Secretarial School, the National Clerical Training Center, and the Commercial and Domestic Training Center on a single site. Work was scheduled to begin in 1985, but by then the World Bank had decided to cancel the project. The achievements under these three projects were less than was desired. The Mano River Institute was late in completion, producing its first graduates in 1983. While generally successful, the program has suffered from lack of GOL support and an uneven placement record for graduates. The MVTC was also late in completion and slow to produce graduates. It too has been hampered by shortages of equipment and supplies and late GOL subsidy payments.

Support for VTE from USAID has been primarily in funding the LOIC. The original campus was a residential one at Klay, accommodating about 150 students. In 1987, new facilities were developed in Monrovia for day students. The program was designed from its inception to become self-supporting by 1988. It appears to have achieved this goal.

A number of other donors have also contributed to VTE. The AITB has received technical assistance, staff training support and materials from the German Government, BREDA-UNESCO, the UNDP, and the British Council. The German Friedrich Naumann Foundation supports 60 percent of the costs of the National Youth Training Center, and the Swedish Government donated much of the equipment to start the program at LaVTC.

A proposal has been made to the Lebanese community in Monrovia to help support the development of a combined

secretarial, clerical, and domestic trades center, along the lines of the one canceled under WB4. To date, this proposal is pending possible action.

Much of the donor support for these programs has been contingent on funding from the GOL, especially for supplies and maintenance. This support has often been delayed, diminished, or absent. As a result, the Ministry of Youth and Sports reports that World Bank funds have been frozen for MVTC. In addition, the Icon Institute (West Germany) has terminated its technical assistance contract with the GOL, and UNDP has threatened to withdraw support from MVTC as well. USAID has cut off support from Youth on the Job Training Center and Youth Agricultural Training Center, as has the Friedrich Naumann Foundation.

7.1.2.7 Quality of Instruction

High quality instruction requires competent staff, adequate resources, and organizational support. The reports and testimony of those involved in the VTE area emphasize shortages in all three areas. It is argued that there is an absence of adequate VTE teacher training programs, that there are too many non-Liberians teaching, and that equipment and facilities are below standard. Under these circumstances, it would appear that the quality of instruction must be low. However, this does not appear to be uniformly true. The problem may be more one of great inconsistency in the quality of instruction, coupled with lack of clear data on either the inputs to, or conduct of

instruction in the programs. The result is an unclear picture of VTE instruction overall.

Performance standards have just been developed, but are not yet in place. No testing of graduates has taken place vis-a-vis these standards. Thus, the quality of instruction cannot be judged by student performance results.

The acceptability of students to employers in their area of training would also indicate quality instruction. The placement rates of graduates, where reported, have seldom exceeded 60 percent. By itself, this could indicate poor instruction or poor program management since placements are affected by the slow economy as well.

There is no systematic evaluation of teaching conducted in the institutions contacted. However, this may occur in some of the newer proprietary programs not examined, or in programs inaccessible to the assessment. In the absence of such information, instructional quality remains uncertain.

The efforts of the AITB to review and certify programs provide a small sample of information on this question. To date, seventeen programs have been reviewed using the AITB standards. All but one have received provisional approval. Final action is pending on eight. These review procedures and standards provide a base for judging program quality which can be expanded.

7.2 Analysis

7.2.1 Needs

The basic needs of VTE can be examined in two major categories: those that involve the logistical or organizational aspects of the programs and those arising from the social and economic context. The logistical and organizational needs include:

1) the provision of adequate resources;

2) access to accurate and current information about manpower and labor market conditions;

3) training in mechanisms and skills for effective management; and,

4) provision for coordination and supervision over the wide variety of programs and activities.

The needs arising out of the social and economic context are:

1) improved social status and appreciation for vocational and technical employment;

2) expanding job opportunities;

3) involvement in and commitment of employers to VTE programs; and,

4) Liberianization of the work force.

These different classes of needs are discussed separately.

Meeting the logistical and organizational needs of VTE is primarily a matter of finances, and secondarily one of organizational and managerial development. The physical resources of teaching materials and equipment are available in local markets or can be imported. The human resources needed for

staff training in teaching and administration are available in the various teacher training and higher education institutions. The overall coordination and supervision agent, AITB, is in operation but lacks additional funds to expand its role.

Adequate information about manpower and labor market conditions is a more complex problem. The Liberian economy consists of a few large employers in the concessions and major cities, and a large number of farms, manufacturing and small entrepreneurial activities. Information about the large employers is relatively easy to obtain. Accurate data about the full economy, especially the traditional agricultural sector, is not available. Methods and resources are not in place to provide a full assessment of needs and conditions. The Liberianization of the work force, and more particularly the VTE teaching ranks, is partly a matter of resources and partly a matter of motivation. There is no evidence that non-Liberians are unsatisfactory as teachers; they simply demand higher salaries. They are needed at present because there is an insufficient number of Liberians drawn to these positions or to programs preparing for them.

For VTE to attract the support required to fulfill its resource needs, there must be higher status and greater importance attached to it. The report of most observers is that this is currently not the case. Students and parents reportedly aspire to higher status occupations and see VTE as reducing students' options and consequent potential for success. Unless

this view can be modified, the political support for improved VTE will not materialize.

Employer commitment to and involvement in VTE must rest ultimately on the question of value to be gained. In a declining economy, employers cannot be expected to act unselfishly. They must see their involvement as leading to a better supply of higher quality and more efficient employees; and that product depends on the quality of the VTE programs. Employers may, however, respond to extrinsic incentives if available: tax reductions for employing VTE apprentices, etc.

7.2.2 Plans

Most of the planning for VTE has addressed the need for more or better programs and resources, or for improved coordination and planning. Plans for increased resource allocation typically call for new equipment, more supplies, improved buildings, and better trained teachers. Program plans call for expanding existing programs to higher levels of training for more students, and to adding new subject areas, such as crafts or clothing manufacture.

The AITB's plans focus on implementing the trade standard testing program, expanding accreditation and program review, and manpower studies. That is, the agency intends to expand and reinforce its role in oversight, evaluation, and planning for all VTE in Liberia.

7.2.3 Constraints

The key constraints affecting the attainment of the goals for Vocational/Technical Education are (1) unavailability of resources, (2) the inadequate integration of Vocational/ Technical Education with its employment environment, and (3) the dysfunctional assumptions and attitudes guiding decisionmaking at the individual household and institutional levels. The lesser problems and shortages faced by Vocational/Technical Education personnel are almost exclusively manifestations or consequences of these constraints.

The inadequate availability of resources is not a technological problem; the technology exists and is available. Moreover, this problem does not seem to affect all institutions evenly. The private institutions which were visited or reviewed appear to have minimally acceptable facilities and a modicum of equipment and supplies--these are in short supply but not absent. The public programs examined have the much more serious problems of deteriorated buildings, broken or obsolete equipment, and no supplies. The cause of the problem seems to be a combination of limited finances and a lack of flexibility in the use of available funds. Administrators consistently reported that, once salaries were paid, there were no funds remaining to cover operating costs. Administrators of public programs were unwilling or unable to reduce or eliminate salaries in order to free resources for other purposes. It is not clear why this constraint exists, but its existence is a serious impediment to

the publicly operated programs making efficient use of the limited resources they have. Administrators in private programs apparently have more leeway to reallocate resources internally when serious shortages occur.

In order for Vocational/Technical Education to meet its primary goal of supplying trained employees for the Liberian economy, it must have effective linkages with that economy. These linkages are of two sorts. The first allows a valid, up-to-date flow of information from the employment sector into Vocational/Technical Education about what skills are needed, when, and in what volume. The second kind of linkage provides a flow of information from Vocational/Technical Education into the employment sector about the availability and skill levels of trainees, and connects them to entry level experiences and on-the-job training (OJT). Both of these linkages are inadequately developed at present. There is no regular, systematic data collection about the labor market and manpower needs, nor an analytical procedure in place for projecting those needs into the short-term future. Thus, the flow of needed information to the Vocational/Technical Education decisionmakers is inadequate.

There is the beginning of a mechanism for providing information about what skills are needed in particular programs; i.e., the Trade/Skills Standards efforts of AITB. As those standards are based in the requirements articulated by craftsworkers on the job and their employers, they represent a validated base for program design. If the Trade/Skills Standards

are expanded and kept up-to-date, they can provide one of the necessary links with the employment environment.

The existing OJT and apprenticeship programs provide a partial linkage of information about program outputs to the employers. The ability to participate in the training and observe the potential employee in the workplace is the best way for the prospective employer to determine their abilities. The results of tests and skill-based performance standards will also help employers evaluate the quality of the Vocational/Technical Education outputs. Tracer studies also can provide information on the link between program outputs and employer needs. When employers have confidence in the quality of the output, they will be much more willing to make commitments to employing graduates and further involvement in OJT and apprenticeships.

There are three dysfunctional assumptions which appear to be guiding Vocational/Technical Education decisionmaking and planning. To the extent they exist in this form, they are serious constraints to improved programs. They could be expressed as follows:

1. The failure of educational programs to produce employable graduates or to fulfill manpower needs justifies a shift toward more formal vocational education programs. (This has been described as the "vocational education fallacy".)

2. The articulation of a national need will generate motivation to fulfill that need by individuals and households.

3. Resources must not be allocated from personnel costs to other uses.

The first assumption leads decisionmakers to plan the expansion and development of vocational programs as the direct and only response to the poor employment records of graduates and the pronouncements of manpower shortages. This response precludes or displaces attention to the quality of existing programs, discourages exploration of alternatives to formal vocational education, and overlooks the desires of individual students and households. This diminished cognizance of client demand links the first assumption to the second. People and households respond to personal needs, not to the results of manpower studies. If the decisionmakers do not attend to the linkages between manpower needs and individual motivations, the needs are likely to go unfulfilled.

The third assumption, treated above, produces such anomalies as electricity classes taught where there is no electrical power, typing classes taught without typewriters, and funded supervisors who are desk-bound by lack of transportation. It is a basic principle of management that attaining efficiency in use of resources requires some discretion. This assumption reduces or eliminates discretion.

It should be noted that this limitation of discretion in government programs is not the responsibility of decisionmakers at the ministry or program levels. Under current policies, these administrators do not have the authority to transfer funds between salaries and other uses. If program administrators

reduce staff, they lose employees and their salaries from their program.

7.2.4 Issues

7.2.4.1 External Efficiency

Some elements of Vocational/Technical Education appear to have a high degree of external efficiency with respect to client demand; other elements have a considerably lower external efficiency. It appears that there has been a growth in the demand for part-time, commercial trade training, resulting in the emergence of several new proprietary operations, primarily in Monrovia. These programs are not eligible for GOL support for at least the first two years of operation and so must survive initially on their ability to attract students. Programs dealing with out-of-school youths also appear to be growing in response to increased demand for private or autonomous programs such as ABTI and LOIC. Demand appears to be steady or rising in building and mechanical trades operated by government programs, such as MVTC, which had 250 qualified applicants for 105 positions in 1987.

Overall external efficiency with respect to integration with the employment sector is low, but with some important exceptions. External efficiency can be demonstrated by three kinds of evidence: placement records of graduates, over- and under-supplies of certain types of trained manpower, and the degree of satisfaction of employers and employees with existing levels of

training. Lack of "fit" may also be suggested by comparisons of the amount of training effort with overall employment and economic activity.

This last consideration leads to some useful, though only approximate, observations. The level of economic activity is reported by major sectors of the economy, as are levels of employment. A comparison of the proportion of graduates of the VTE programs for each sector, using 1985 data, indicated that the distribution of training output does not match the distribution of employment or economic activity. Some of this is to be expected due to the natural mix of labor and physical capital in some sectors; services tend to be more labor intensive and transportation more capital intensive, etc. Nonetheless, training output seems excessive in the service sector, trades, and construction, and too low in trades and transportation. A portion of the service training graduates may be headed for employment in these other sectors, such as typists for an airline. While these comparisons should be interpreted with caution, they do indicate the possibility of misallocation of training resources.

Complete placement reports across all institutions in VTE are not available. Using those that are, the placement picture is mixed. MVTS has achieved very high placement rates for trainees in apprenticeships by requiring that applicants have a written commitment from an employer before admission. The fact that they are able to attract twice as many applicants as they

have places suggests that the employers are enthusiastic about the program. Placement records following the apprenticeship are not available. Placement rates are high at LOIC, reported at 80 percent in 1984. The YOJT placement rates are somewhat lower, with a report of 57 percent in 1987. These rates cover only a small proportion of the graduates and so cannot be taken as indicative of the overall picture.

Satisfaction with the overall level of training appears to be low. A 1985 survey of those on the job and their employers in four sectors (manufacturing, construction, utilities, and repair services) found evidence of shortcomings in existing skill training programs. The survey of 1,645 employees found over 77 percent expressed a moderate or great need for further training. There was also poor fit between the levels of training of the employees and those expected by the employers.

A manpower study, also conducted in 1985 by AITB, found a general oversupply of trained manpower. There was a small need evident in the administrative, clerical and technical areas. However, the overall picture was bleak. The study concluded that no new investments in training would be needed for the next five years, unless there was a dramatic upturn in the economy. That event does not seem likely.

7.2.4.2 Internal Efficiency

The central issue with respect to internal efficiency concerns the best setting for VTE: job-related programs closely linked to employers, specialized centers, or regular school

settings along with regular academic training. Other issues involve the rigidity imposed by external policies discussed above, and comparisons between part-time and full-time programs.

Since there is no standard for the quality or skill level of VTE graduates, it is not feasible to make direct comparisons among programs. But rough comparisons considering inputs can be made. For example, BWI is a residential, high school level program, including roughly 60 percent regular subjects and 40 percent VTE. The annual costs are over $2,400 per year for each student. A four-year graduate will have received approximately $4,000 of VTE (certainly an underestimate since VTE courses are typically more expensive than other subjects). An LOIC graduate will have had approximately $2,500 worth of VTE, delivered in a concentrated 12-15 month program. LOIC graduates are highly sought after, so it would seem their technical training is at least as good as BWI's, but at a much lower cost. This result is consistent with comparisons in other countries.

Another aspect of internal efficiency depends on the degree to which a program can remain closely linked and integrated with the needs of employers. Where academic and vocational/technical subjects are offered side by side, the tendency is for the VTE courses and students to have lower status and importance. Students do not wish to have future opportunities reduced by being restricted to a vocational track, even if they have no realistic prospect of attending a university program. The same tendency creates pressure to increase the academic and reduce the

VTE components in the program. Pressure to do so has been reported for the two main high schools specializing in VTE: BWI and WVSTHS. In such an environment, it is unlikely that the VTE programs will receive the necessary resources and support to maintain high quality. It is also more difficult to adjust the programs to the changing demands of employers because they are linked into an academic curriculum which seeks other objectives. The higher cost and the generally less efficient environment make a strong argument for keeping VTE in specialized, job-linked settings.

7.2.4.3 Access and Equity

The performance of VTE institutions in terms of providing open access and equitable treatment to all elements of the population is not consistent. Generally, there are VTE opportunities open to all social and economic levels of the population. The Ministry of Youth and Sports programs are especially designed for dropouts, who may lack other advancement opportunities. Many home arts and trade programs are open to marginally literate or illiterate students. The low costs of many programs present little or no barrier to low income students, though this is not true of higher level, technical training. High school diplomas are not uniformly required in trade or clerical programs. In general, low levels of previous achievement or income do not disqualify persons from VTE opportunities.

There are, however, major gender differences in access. Enrollments in the mechanical and building trades programs are almost exclusively male; enrollment in the clerical and domestic programs is predominantly female. Gender differences in access to programs do not appear to be a consequence of discriminatory admissions. Rather, these disparities appear to result from gender/job stereotyping by the students leading to gender segregating self-election patterns. There also may be subtle cultural practices which reinforce these self-selection tendencies. This issue deserves closer study over time.

7.2.4.4 Administration and Supervision

There are two levels of administration and supervision to be considered in the examination of the VTE subsector: the overall role of the AITB in VTE programs and policy-making, and the administration and supervision of individual programs. The AITB has been given a broad mandate by the NCV/TET and has taken forceful steps to fulfill its charge. This raises the issue of the proper degree of centralized administration and supervision of VTE in Liberia. There is a strong argument for a limited amount of authority and control at this level. The overall efficiency and integration of programs require effective standards for trade skills and a testing apparatus for enforcement. The AITB is the only agency in the country which has the capacity for this task. There is also a need to protect students and others from shoddy or dishonest programs and to establish national standards for accreditation and certification.

Again, the AITB has made a good start in this direction. A need also exists for regular collection and analysis of nation-level data on employment, manpower needs, and industrial and commercial trends. While this is also within the AITB mandate, but has not been fully implemented. All of these are important elements in an efficient and well-managed VTE system.

There is a danger, however, in overcentralization. The ability of individual organizations to grow and adjust to changing local circumstances should not be diminished. Nor should policy degrade the strong motivations for price competition, creativity, and responsibility which go with autonomy and local control. To be fully effective, therefore, the AITB and NCV/TET should take care to maintain a balance between too much and too little control and coordination.

Another issue of control involves the distribution of responsibility for VTE programs among several arms of government: the Ministry of Education, the Ministry of Youth and Sports, the Liberian Institute for Public Administration, and independent boards for BWI, LOIC, and LSVTC. This arrangement provides opportunity for duplication of effort, conflict, and inefficiencies. The total of over $600,000 devoted to national-level administration and supervision seems too high. It is likely that a new administrative structure could be found which would eliminate duplication and still preserve the individual character and success of existing programs.

The current structure for administrative supervision and control at the level of GOL is designed for supervision of operations rather than outcomes. The structure is not effective because its resources for exercising close supervision are consumed in salaries, leaving little or nothing for transportation and related expenses.

7.2.4.5 Costs and Financing

The central issue in the arrangements for funding VTE is whether they promote efficiency. In examining this issue the discussion will deal separately with costs and financing. There is wide variation in who bears the costs of VTE. In the private programs, students bear the major cost. The percent of total costs covered by tuition and fees ranges from 100 percent in some proprietary programs and over 90 percent for Zion Academy to 50-60 percent for mission-related schools which receive church subsidies and contributions. The GOL budgets subsidies for many of the private programs which would reduce the proportion borne by individual students. However, for most schools subsidies for the current year have not been paid. For government supported schools the students generally pay less than 10 percent of the costs in tuition and fees. For some of the government supported schools, especially those for out-of-school youths with low incomes, the low tuition/fee charges are justified. It is in society's interest to help these students become productive members of society instead of dependents. For other programs

where this is not the case, students should bear a larger portion of the cost as an investment in their own future productivity.

The current financing arrangements for government controlled programs are not conducive to efficient operations either. First of all, the program administrators have little discretion in resource allocation. This prevents them from adjusting mixes of resources for best effect. It is also difficult for them to plan carefully because the GOL is unreliable in the level and timing of promised subsidies. The support for private programs through ad hoc subsidies also contributes to inefficiencies in operation. The amount of the subsidy bears no relationship to the size, purpose or efficiency of the program. The GOL does not use its subsidies to promote its own planning priorities, reward exemplary performance, or encourage efficiency in the recipients. The subsidies are certainly appreciated by the recipients when received but are not used as an effective policy instrument of the government.

7.2.5 Conclusions

Conclusion 1. There are wide variations in both internal and external efficiencies evident in VTE programs. In part this is a consequence of the lack of integration of many programs with their client and employment environment. It is also a result of variations in the degree to which administrators can control resources and reallocate them to obtain maximum effect. In particular, the personnel policies of the GOL cause serious

problems and interfere with efficient operations. Efficiencies would also be improved by systematic and regularly collected data about employment trends and needs. The availability of this information will help planners and program operators better integrate programs with the employment environment.

Conclusion 2. Inefficiencies in vocational/technical education result from the lack of compatibility of specialized VTE with operations in secondary schools. The demand of the regular curriculum and lower status of VTE programs create dysfunctional pressures and rigidities in the organization. These can prevent VTE programs from remaining responsive to the needs of the labor market and receiving the status and student loyalty they deserve.

Conclusion 3. Except for those from very low income families, students in government supported programs should bear a larger proportion of the cost by paying higher tuition and fees. This will provide the schools with more badly needed discretionary resources and reinforce the responsibility of the students for investment in their own education.

The current financing arrangements for both private and public programs are troublesome. Program administrators should be allowed more discretion in using available resources, including staff salaries. A rational mechanism should be developed for allocation of subsidies to private schools. The mechanisms should be structured to encourage efficiency and local effort in support of the programs.

Conclusion 4. There is evidence of gender segregation in VTE programs. Such segregation, even when not the result of conscious action or policy, can still be damaging. It is necessary to examine admission and recruiting practices to be sure that students of both sexes receive full opportunity to pursue the vocational and technical careers best suited to their abilities and objectives.

Conclusion 5. The current structures for administration and supervision at the national level need development and improvement. The NCV/TET and AITB are on the right track in developing standards and testing mechanisms as well as oversight and accreditation. More work is needed in these areas. Special priority should be given to regular manpower training and need data collection and analysis. There is also duplication of effort in national level supervision and administration of VTE programs. This situation should be remedied.

7.3 Recommendations

Recommendation 1. Conduct a study of the academic skills necessary for VTE programs, with a view to integrating the relevant skill training into the main VTE courses.

Recommendation 2. Transfer resources now being used inefficiently in school-based VTE to more efficient, better integrated programs. In particular, BWI and WVSTHS should be

phased into general programs and their VTE resources transferred to MVTS, LSVTS, LOIC, or similar programs.

Recommendation 3. Strengthen and expand the operations of the AITB in developing trade standards and testing, and the integration of these standards and testing into the VTE curricula. In particular, logistical support, computing equipment, and additional clerical staff should be supplied.

Recommendation 4. Institute a Manpower and Training Studies branch in AITB (a) to conduct tracer studies as a basis for better linking VTE programs to the needs of the labor market, and (b) to cooperate with the Ministry of Planning and Economic Affairs on manpower studies.

Recommendation 5. Conduct a study of the qualifications and training needs of VTE faculty as the basis for development of inservice training programs and materials.

Recommendation 6. Take active steps to ensure the quality of emerging VTE programs in the private sector. This can be accomplished by strengthening the program review and accreditation activities of the AITB.

Recommendation 7. If funds become available in the future, create incentives for employers to participate more fully in apprenticeship training and OJT. These incentives could include tax concessions, salary subsidies for apprentices, and

preferences in GOL contracts and programs for firms who support VTE programs.

Recommendation 8. Undertake a public relations campaign to improve the public perception of the status and importance of VTE.

8.0 HIGHER EDUCATION

8.1 Status

The history of higher education in Liberia is largely the history of two institutions: the University of Liberia and Cuttington University College. The University of Liberia was founded in Monrovia as Liberia College in 1862 and chartered as The University of Liberia in 1951. It is a public institution, enrolling approximately 4,100 students, and operates primarily on Government subsidies and appropriations. Cuttington University College was founded by the Episcopal Church in 1889 and is located near Suacoco (Bong County). Cuttington was closed for financial reasons in 1929 and reopened in 1949. It currently enrolls approximately 1,000 students and retains its ties with the Episcopál Church; the Episcopal Bishop is Chairman of the Board of Trustees. The College is budgeted to receive a considerable portion of its revenues from Government of Liberia subsidies, but these payments have been in arrears for the past two years.

Major changes have occurred in the recent history of both these institutions which have implications for their current status and prospects. The University of Liberia has grown rapidly, tripling its enrollment between 1970 and 1983 and adding a second campus at Fendell, about 17 miles from Monrovia. Along with this growth has come an apparent shift in the University's place in the political system. In the 1970s, higher education had a prominent place in the effort for national development. Educational opportunities for the entire population were

important elements in both the Unification Policy of President Tubman and the Total Involvement Policy of President Tolbert. However, more recent events suggest a change in perspective. The University was temporarily closed by President Tolbert following the "rice riots" in 1979, and it was temporarily closed again in 1984 by the current government for political reasons.

The recent history of Cuttington University College shows significant shifts as well. The college had what is believed to be the first college-level agricultural program in West Africa as well as a Divinity School. The agriculture program was moved to the University of Liberia in the late 1960s and the Divinity School closed, resulting in an emphasis on the liberal arts in the College. These liberal arts programs have enjoyed a substantial measure of local prestige. Cuttington currently operates a Divinity Division and has added the USAID-funded Rural Development Institute (RDI), a two year Associate of Arts (AA) program in Plant and Animal Sciences. The college also houses what many consider the best African museum in the country.

The past successes of Cuttington University College have been jeopardized by a number of developments. There has been turnover of top level administrators and the new president has only recently arrived on-campus. There have been at least three recent episodes of student unrest resulting in disruption of programs and some damage to the campus. High costs and lack of employment opportunities for graduates have caused USAID to phaseout support from the RDI. Finally, general lack of

financial resources has resulted in some deterioration of facilities and materials.

The history of two- and three-year institutions is shorter but similarly troubled. The 1971 plan of the Government of Liberia called for a new Harper College of Technology at Harper in Maryland County. The proposal was included in the application for funding under the first World Bank education loan (WB1) but was rejected by the Bank as a project with low probability of success. A campus was begun at Harper in 1971-72 but was not occupied until 1978. At that time the Government of Liberia established the William V.S. Tubman College of Technology (WVSTCT) at Harper. It offers three-year AA degree programs in basic science and engineering subjects. The original Harper College proposal included a program in technical teacher training, but this was not included in WVSTCT. The College grew in enrollment to a peak of 220 students in 1983 but declined to 140 by 1987.

Since its founding the College has been plagued by poor water and electrical supply, inadequate maintenance, poor communications with the rest of the country, and separation from the major employers and industries. The college also has encountered difficulty recruiting Liberians for faculty positions; there are only 15 Liberians among the current faculty of 32. The college is presently without electricity, adequate faculty housing, and has deteriorating facilities and instructional equipment.

In addition to WVSTCT, four institutions have claimed junior college status: Ricks Institute (now defunct), Zion Academy, Monrovia College, and the College of West Africa. These are currently private institutions created by local initiative rather than Government of Liberia policies. They must rely on private financing for at least two years, but may then petition the Government of Liberia for support. They do not fall under the control of the MOE and represent a direction of development neither called for nor anticipated in earlier plans and policy statements.

There are five so-called Bible Colleges in Liberia, offering two- and three-year programs in religious studies and divinity. They are the Africa Bible College (Nimba County), Liberia Baptist Theological Seminary (Monrovia), United Methodist Theological Seminary (Bong County), Catholic Seminary (Bong County), and the Assembly of God Seminary.

Specialized postsecondary education also is offered by the Tubman National Institute for Medical Arts (TNIMA) for training medical paraprofessional and nurses, and by two Rural Teacher Training Institutes, for the training of primary school teachers. These are treated in the chapters on Voc/Tech Education and Teacher Education respectively.

8.1.1 National Goals and Strategies

In goal statements by national leaders, higher education has been consistently linked to the development needs and goals of

the country. The statements of the Tubman and Tolbert administrations, for example, place repeated emphasis on the role of higher education in producing the educated manpower to fulfill the country's needs. For example, President Tolbert stated:

> "...our institutions of higher education should be strengthened so that they become fully involved in training Liberians to meet the manpower requirements of the nation as well as to serve as centers of basic research so essential to national development. They verily should be made second to none and our people should develop the consciousness of appreciating their own and earnestly and consistently strive to make them what they should be." (from Snyder and Nagel, 1986, p. 97)

Though similar in some respects, statements of goals from the present administration have placed a greater emphasis on basic education for Liberians and placed higher education in a different light. President Doe has said:

> "...the activities and undertakings of this institution [the University of Liberia] must be made relevant to the socio-cultural and economic realities of the Liberian experience. By this means, the subjects taught by the various colleges within the University, and research conducted, should be done with the development needs of our people foremost in mind." (Givens, 1986, p. 270)

While these may be common ideas for higher education in developing countries, they require close examination, especially in relation to other expressed goals for these same institutions.

The Report of the 1984 National Policy Conference on Education and Training takes a different approach. While the Conference participants recognized the importance of national development goals, their recommendations focused almost

exclusively on structural and financial reforms. The discussion papers on higher education published with the Report make a strong case for the more traditional views of higher education. They recommend expanding opportunities for advanced study, strengthening academic freedom and integrity, and enforcing higher academic standards. The Report also recommends the creation of a National Commission on Higher Education to coordinate and oversee higher education throughout the country.

A comparison of stated national goals across these sources shows a potentially serious conflict. The Government of Liberia presently cannot afford to simultaneously expand both higher and basic education. Similarly, it cannot have institutions highly responsive to the immediate needs of national development or political issues and at the same time devoted to traditional academic values and long-term research and scientific training objectives. These conflicts are central to the current status of these institutions and an integral part of the analysis, recommendations, and conclusions that follow.

8.1.2 Structure

Liberian higher education includes relatively few institutions, thus the organizational and governance structure is not complicated. These institutions are largely autonomous from the Ministry of Education, which has direct supervisory responsibility for education only through the twelfth grade. Each of the degree-granting institutions has a charter from the National Legislature and a Board of Trustees appointed under the

terms of that charter. The University of Liberia and WVSTCT are public institutions. They receive their funding directly from the Government of Liberia and nominees to their Boards of Trustees are approved by the President of Liberia. Cuttington University College's charter provides that the Episcopal Bishop of Liberia serves as the Chairman of the Board and appoints its 15 members from those nominated by the existing Board, subject to their approval.

At present, there is no central coordinating or policy making body specifically for higher education in Liberia. This has not necessarily been the cause of any problems. The 1984 National Conference on Education produced a proposal for the creation of a National Commission on Higher Education. The MOE has proposed the formation of this Commission to the National Legislature and action on the proposal is pending.

Both the University of Liberia and Cuttington University College have similar administrative structures. The president is appointed by the Board of Trustees and is the chief executive officer of the institution. The major line administration divisions reporting immediately to the president are the offices of comptroller, academic affairs, and administration. The academic and administrative offices are headed by vice presidents at University of Liberia and deans at Cuttington University College. The heads of the academic units report to the academic affairs office; this includes deans or division heads and department chairs. The comptroller handles financial

transactions, and the remainder of administrative offices report to the administrative vice president or dean.

The University of Liberia and Cuttington University College have faculty senates, consisting of representatives selected from the academic divisions and departments. At the University of Liberia, the faculty senate has responsibility for all academic policy, including program and recommendations for faculty promotion and tenure decisions. At Cuttington University College, the faculty senate was newly formed in 1987 and has not developed a clear role in college governance. The faculty senate at Wm. V.S. Tubman College of Technology has responsibility for academic policy and program recommendations, but does not as yet have a senate approved role in faculty promotions and tenure decisions.

Coordination among administrative units at the University of Liberia is the responsibility of the 28 member University Council, which consists of the President and Vice Presidents, Deans, Division Directors, Comptroller, Auditor, and faculty representative. At Cuttington University College and WVSTCT there is no formal structure for this purpose.

Faculty appointment, promotion, and tenure procedures are roughly similar on all three campuses. Appointments to any academic rank are by the president of the institution on recommendation of the academic affairs dean or vice president. Initial review for promotion and tenure is handled by faculty committees and forwarded by deans or division directors. The

usual criteria of teaching, research, and professional service are listed as the basis for decisions, but teaching is the primary concern. Research is generally not expected reportedly due to large teaching loads and lack of resources.

There are some significant structural differences between University of Liberia and Cuttington University College. The University of Liberia includes seven separate colleges, a large Continuing Education Division, a Planning and Development office, and operations of three campuses (Main campus, Fendell, and Medicine). The medical school is affiliated with JFK Hospital and the medical faculty are also part of the hospital staff. Cuttington University College has no college-type units but operates six academic divisions and a separate two-year program in the RDI, all on the same campus. WVSTCT operates seven departments on a single campus, with no intervening organizational structure.

None of the institutions have units responsible for institutional research (although some of this work falls in the responsibility of the Planning and Development office at University of Liberia). Neither did any institution report structures corresponding to the student recruiting or private fund raising functions assigned to Admissions or Development offices in U.S. institutions. Auxiliary services, such as food service, bookstore, etc. are operated by the institutions. In addition, student government appears to be an active and serious

concern of the students at both University of Liberia and Cuttington University College.

8.1.3 Program

8.1.3.1 Students

At present, there are approximately 5,200 students enrolled in degree programs in Liberian higher educational institutions and approximately another 300 in continuing education and remedial programs. The recent enrollment totals for the three institutions are shown in Table 8.1. Enrollment by program for the three institutions is reported in Table 8.2.

8.1.3.2 Faculty

The three institutions discussed here employ approximately 349 faculty members; 240 at University of Liberia, 86 at Cuttington University College and 23 at WVSTCT. These counts are somewhat misleading, since they are headcount of faculty members rather than full time equivalents (FTE). Computations of student:faculty ratios therefore are subject to wide error. While these are the best counts available, the student:faculty ratios are probably underestimates, especially in those programs such as law and medicine which typically employ larger numbers of part-time faculty. There are wide variations in these ratios across departments, therefore how FTE is defined is a policy question of some importance.

The faculty cohort serving higher education reflects a wide variety of backgrounds and qualifications (Table 8.3). An

Table 8.1

Enrollments in Liberian Higher Education
1985 - 1987

INSTITUTION	YEAR 1984	1985	1986	1987
Univ. of Liberia		2998	3522	4073
Cuttington (est.)		1000	1000	1000
Wm. V.S. Tubman	210	180	153	140
TOTAL:		4178	4673	5213

Table 8.2

Enrollment in Liberian Higher Education
by Institution and Degree

Area of Study	University of Liberia			Cuttington College			WVSTTCTC
	A.A.	BA/ BSc	Post BA	A.A.	BA/ BSc	Post BA	A.A.
Agriculture		198		93			
Social Sci.		390					
History					7		
Political Science					21		
Economics					65		
Science/Math		732					
Chemistry					58		
Physics							
Biology					72		
Computer							
Mathematics					27		
General Science					4		
Humanities/Art							
English					16		
Foreign Lang.					13		
Theology					13		
Education		156			51		
Engineering							
Arch.							11
Civil							26
Electrical							34
Electronic							39
Mechanical							30
Law		119					
Medicine							
MD		82					
RN					123		
Business		1755			261		
Undecided					91		

Table 8.3

Faculty Qualifications by Degree and Nationality
1987

INSTITUTION	Number of Faculty*							
	Associate		Bachelors		Masters		Doctorate	
	Lib	Non-Lib	Lib	Non-Lib	Lib	Non-Lib	Lib	Non-Lib
Univ. of Lib.	8	2	73	10	108	30	25	59
Cuttington	17	0	11	4	26	15	6	11
Wm.V.S. Tubman	12	0	0	2	3	7	0	5

* Includes Teaching Assistants and Demonstrators

examination of the qualifications of the faculty is related to several concerns about the educational system. Since there is no doctoral-level training available in Liberia and there are post-baccalaureate programs in only three areas, faculty members receive the great majority of their graduate training elsewhere. Approximately 77 percent of the graduate degrees earned by these faculty were obtained in the United States, 14 percent in the United Kingdom and Western Europe, four percent in African institutions, and the remaining five percent widely distributed in the Pacific, Eastern Europe, and the Caribbean. This represents a considerable cost to the students and the country, since the support for foreign study of Liberian university faculty is expensive and some participants do not return.

The absence of qualified Liberians also adds to the cost and complications of faculty recruiting and retention. Non-Liberians represent 32 percent of the overall faculty, but over 69 percent of the total faculty holding doctorates. Recruiting expatriate faculty adds as much as $3,000 to the ordinary expenses of hiring each faculty member due to travel and moving costs. In addition, expatriate faculty are often on a term contract and remain only two to three years, increasing the rate of faculty turnover. In some programs, detailed knowledge of Liberian culture, history, and society are especially important. It is difficult and time consuming for non-Liberians to acquire this knowledge, yet their lack of this knowledge sometimes can interfere with their effectiveness.

Both the University of Liberia and Cuttington University College actively have encouraged faculty to seek further training abroad. Up to 1984, the University of Liberia used approximately $300,000 per year in Government of Liberia Development Funds, FAO, USAID, and World Bank funds to support such study and over 100 faculty have participated. Since 1984 no funds have been budgeted for this purpose.

8.1.3.3 Curriculum

The degree programs in Liberian higher education cover a large span of content areas. There are 23 bachelors-level degree programs in the University of Liberia alone, with minor study offered in nine others. Cuttington University College offers B.A. programs in 12 of the same areas as University of Liberia, as well as programs in theology, educational administration, and general science that are not offered at University of Liberia (Table 8.2). To this total can be added the LL.B., M.D., and regional planning graduate programs at University of Liberia and five associate degree programs at WVSTCT. Thus there are at least 47 separate degree granting programs in operation. There are approximately 4,900 students in these degree programs, with approximately 3,000 in science and business programs. The remaining 1,900 students are distributed across the 29 other degree programs. Such wide variation in the distribution of students among programs is not unusual in higher education. However the rather small number of students in many programs is a concern discussed below.

The BA/BS programs are designed for four years of full-time study, or eight semesters, with the exception of engineering degree programs which extend to five years. The A.A. technical programs at WVSTCT are three-year, full-time programs while the library science program at the University of Liberia is a two-year, full-time program. The LL.B. degree is designed for three years full-time or five years part-time. The medical school is a five-year, full-time program.

The WVSTCT program is designed to prepare high level technicians in five engineering areas: Civil, Electrical, Electronic, Mechanical, and Architectural. The program has been modified in the recent past to place approximately 60 percent of instructional emphasis on theoretical and content area (including academic subjects) and about 40 percent of the emphasis on practical, laboratory, and field work.

The actual rate of student progress through these programs, however, is considerably longer than planned, largely due to the inadequate prior preparation of incoming students.

8.1.3.4 Examinations

Admission to the BA/BS programs in University of Liberia and Cuttington University College requires a high school diploma and passing the National Examination. Applicants must also take a college-developed admission/placement examination. These are not standardized tests, but are developed to reflect the

expectations of the individual campuses. No validity or reliability statistics are available for these examinations.

There are significant differences in the way University of Liberia and Cuttington University College use their own admission examinations. For admission to Cuttington University College, passage of the college examination in English, science, and mathematics, is required. There is no conditional admission or remediation for current students.

The University of Liberia administers an admission examination in English, science, and mathematics. For regular admission at the University of Liberia, applicants must pass all sections of the examination. For conditional admission, however, they must pass one section of the two-part English/mathematics exam and score above the thirteenth percentile on the second part. Students who fail all or part of the exam and who are admitted are required to take remedial work before entering the regular classes. Some students are admitted who have failed both sections of the examination. The failure rate on this examination is high, over 70 percent of students accepted to UL enter on conditional admission. The first semester or year of study for a majority of UL students is devoted to remediation of academic deficiencies rather than part of the degree program. Regular admission is then attained by passing the appropriate noncredit remedial course with a grade of "C" or better.

There are no other college-wide or standardized exams used for course or degree requirements. Degree program requirements

are fulfilled by passing the prescribed courses which include passing whatever subject-matter examinations are used by the instructors therein.

8.1.3.5 Facilities and Equipment

The quality and maintenance of facilities and equipment are major problems in Liberian higher education. The problems are a reflection of the varying character of the three campuses. The University of Liberia occupies three sites: the old (Monrovia) campus, the new (Fendell) campus, and the Medical school facilities connected with JFK Hospital in Monrovia. The University of Liberia Monrovia Campus includes six major buildings with academic and administrative spaces, two dormitories (men's and women's) and four other auxiliary and support buildings. The University administration and all the programs except for the College of Agriculture and Forestry and the College of Science and Technology are currently on the Monrovia campus. Those two colleges have moved to new buildings on the Fendell campus. The Administration building and approximately 30 faculty housing units are complete but lack furniture and the engineering facilities on the Fendell campus are 90 percent complete.

Operations between the two campuses have encountered several problems. Bus transportation for students suffers from too few vehicles and frequent breakdowns. The water from Fendell campus wells has such a high dissolved iron content that it is unusable; city water is unavailable. The campus has experienced a series

of thefts from faculty housing, classrooms, and construction sites, reportedly by residents from low income residential areas which have grown adjacent to the campus. Most importantly, the World Bank has withdrawn support from the campus development and funds for completion of the project are lacking. Completion of the move is planned for mid-1988 but no firm commitment for funding currently exists.

The Cuttington University College operates on one compact site in which buildings are generally in good repair. CUC is almost entirely residential, with faculty and students housed on campus. The Rural Development Institute (RDI) has classroom and farm structures on the same site. The main difficulties are lack of reliable electrical power and athletic facilities, as well as insufficient faculty housing.

The WVSTCT has 13 structures including an administrative building and an academic building containing classrooms, faculty offices, and a library. There also are two dormitories, an engineering workshop, and limited faculty housing. The buildings suffer from lack of maintenance and there is a shortage of instructional materials for the science and technical subjects. There is no reliable electrical power because there are no funds to purchase fuel for the existing generator. Phones are unreliable, vehicles are in short supply and poorly maintained. Poor roads make movement from this outlying campus time-consuming and possibly dangerous.

8.1.3.6 Costs and Donor Support

There is considerable variation in the total and unit costs across these three higher educational institutions. The estimated annual costs per student are shown in Table 8.4. The most notable observation about these cost comparisons is the wide difference in the tuition costs between UL and CUC. Students at UL pay less than 22 percent of the total cost of their education in tuition and fees while the Cuttington students currently pay 43 percent. The high GOL subsidy at the University of Liberia reduces personal investment in higher education and probably results in inflated demand for admission.

The main targets of recent donor support to higher education have been facilities construction, institutional planning, activities, and faculty development. The first phase of the Fendell campus expansion, new facilities for the College of Agriculture and Forestry, was supported by $1.6 million from the World Bank First Education Project (WB1). This work, begun in 1975 and finished three years late in 1981, was seriously flawed. It ran 27 percent over budget and was so rife with problems that the University of Liberia initially refused to accept the facilities. Some of the inadequacies remain to date. World Bank funds ($267,000) also supported creation of a planning unit at the University of Liberia.

Direct support to Tubman Teachers College at UL included both equipment and fellowship support for faculty development. The University received $50,000 for equipment under the First

Table 8.4

Annual Costs per Enrolled Student at the University of Liberia and Cuttington University College 1987

	University of Liberia	Cuttington University College
Government of Liberia	$1060	$ --
Institutional	--	2146
Private	290 *	1592**
TOTAL	1350	3738

* Tuition and fees.
** Tuition and fees, plus $431 room and board costs.

World Bank Education Project, $100,000 under the Third World Bank Education Project, and $175,000 under the Fourth World Bank Education Project. Fellowship support under the Third and Fourth World Bank Education Projects amounted to $780,000.

Both the Rural Development Institute (RDI) and the Science and Technology Center at Cuttington University College (a classroom and laboratory complex for science instruction) were supported by USAID. The RDI offers a two-year Associate of Arts program for agricultural extension agents. Support included construction of facilities, faculty salaries and student fees. The program has not been able to place recent graduates and, as a result, USAID has decided to phase out support. No students will be admitted to the program after 1987 and the last class will graduate in 1989.

8.1.3.7 Quality of Instruction

There are no systematically collected data on which to base an assessment of instructional quality in Liberian higher education. The University of Liberia has no regular course or teacher evaluation mechanism. Cuttington University College has such a survey, administered to students at the end of each course. But the results are not available for analysis across the entire college. It is necessary therefore to look at less direct indicators.

The shortages of instructional materials and supplies have had a negative effect on instructional quality, as do problems of

transportation between the University of Liberia's two campuses. Deterioration of classrooms and laboratories, erratic electrical power, and a small library also constrain educational quality. No campus has a regular computer center. Athletic and recreational facilities are very limited.

In addition, student-faculty contact on the University of Liberia is less than optimal. Most students are commuters; many faculty teach part-time or teach on two campuses. Many faculty lack office space. In addition, many faculty reportedly hold outside jobs, limiting their availability to students. Taken together with the physical problems, these factors indicate a poor environment for instruction.

8.2 Analysis

8.2.1 Needs

Perhaps the most urgent need facing higher education is for improved ways of dealing with the poor preparation of entering students. Assuming there is no short-term solution to the low achievement levels of high school graduates, higher education institutions must respond constructively to the situation. The University of Liberia continues to admit underqualified students, resulting in high costs for remediation and much wastage. Cuttington University College and WVSTCT refuse admission to these students and face a rapidly diminishing pool of qualified students. Both the development needs of the country and the high social demand for higher education opportunities

preclude the option of simply denying access to students who do not qualify. A politically and financial feasible course of action is needed.

A second area of need is for improved financing of higher education. The overall financial picture for higher education is bleak. Given the decline in the Liberian economy and the cutbacks in both GOL and donor support, financial needs are critical. Since the overall availability of resources is not likely to increase dramatically in the short-term, to simply identify a long list of candidates for increased financing would not be useful. Rather, discussion needs to focus on the highest priority financial needs.

The most pressing financial needs are in the area of basic support for instruction. For even rudimentary instruction to take place certain minimal resources are necessary: teachers, buildings, basic utilities, and instructional tools. Inadequate financing has interrupted the availability of these basic resources or allowed them to deteriorate to the point where the viability of instructional programs is threatened. The most important needs are (a) to regularize payments of subsidies and salaries so that personnel-related disruptions are minimized, and (b) to institute restoration and preventive maintenance of basic structures and equipment needed for instruction. Preventive maintenance is especially important, since replacement costs for much equipment and structures are prohibitive.

Improved management capacity is a third major need of the

higher education subsector. Maintaining and improving the basic support system for instruction requires effective management. Improved management may require less in the way of financial resources and more in the way of training and long-term planning, since many of the necessary management personnel already are in place.

Increasing the number of Liberian faculty is a fourth area of need. The costs of maintaining a large contingent of expatriate faculty is high. The direct costs of recruiting are added to the related costs of higher turnover and possible cultural or social distance from the lives of students. The highest cost and greatest need is at the doctoral degree level, where 69 percent of the faculty are non-Liberian. There is little prospect for developing major doctoral-level programs in Liberia in the near future. Therefore the need is for increased opportunities for Liberians to do advanced graduate work abroad and return to teach. Retaining Liberian faculty may be difficult due to the absence of adequate pension systems for faculty. Such a system of benefits is needed as well.

A fifth area of need is for greater articulation among institutions. There is at present no basis for serious and sustained articulation among the higher education institutions or between higher education institutions and secondary or vocational/technical schools. Improved coordination and integration of programs depends on a system of communication among the interested parties and a common basis for understanding

and evaluating programs. Some system of accreditation and/or program review is often the basis on which articulation can be built. That is, a system of accreditation would allow the development of common standards and definitions of program content and performance. Once established this could serve as a basis for better articulation and coordination of programs across institutions. Such a structure is needed in Liberia.

Finally, a country the size of Liberia cannot expect to offer the full-range of higher education opportunities its students may seek. Many of these opportunities for foreign study and faculty development rely upon established relationships with higher education institutions in other countries. Many of these relationships are now maintained by Liberian institutions, but more are needed.

8.2.2 Plans

The University of Liberia Long-Range Plan (1975-87) calls for a number of program developments, some of which have already been achieved. The ones remaining unfulfilled include:

1) a program in nursing, courses in secondary foreign languages, commercial education, technical education, and home economics education.

2) a system of cyclical self studies by each department.

3) masters programs in education, English, political science, agriculture, business, public administration, and science.

4) postgraduate programs in law and medicine.

5) an increase in the library holdings to 315,000 volumes and 2000 periodicals by 1987.

The plan also includes less specific proposals to deal with the problems of remediation and articulation mentioned above. The programs in business, law and continuing education would remain on the Monrovia campus, while the rest of the degree programs would move to the Fendell campus.

The Cuttington University College prepared a Centennial plan (1889-1989) in 1985. It is a highly ambitious document calling for many new programs and buildings. These involve upgrading the six existing divisions to colleges and adding new schools of administration, engineering, and law.

There is no long-range plan extant for WVSTCT, but the addition of BS level work is desired, particularly to attract graduates to teach and to provide technical teacher education. The college is also exploring arrangements with University of Liberia under which its AA graduates could be admitted with advanced standing to the University of Liberia. Presently transfer credits are allowed only on review of individual student records.

The completion and occupation of the Fendell campus is the core of the University of Liberia facilities long-range planning. The "Ultimate Development" stage of the plan calls for four academic complexes of 348,710 sq. ft., eight administration and support buildings totaling 545,920 sq.ft., and 14 structures for student and faculty housing and services totaling 295,000 sq.ft. Funding and construction of the campus are now sufficiently behind the planned schedule that it is unclear how

much of the "Ultimate Development" phase is feasible. The University of Liberia long-range plan also calls for a new academic building and cafeteria on the medical campus, as well as road and landscape work.

Cuttington University College's Centennial Plan calls for new structures for programs in nursing, law, and engineering and a sports complex, along with the addition of ten faculty housing units, renovation of existing dormitories and two new ones. Short-term plans are for improved electrical service, building renovation, and an amphitheater.

Facility planning for WVSTCT includes obtaining reliable electrical and water service. The college has proposed taking over the Wellenburg Training Center, which was given to the Government of Liberia by LAMCO. The center includes equipment and library materials.

8.2.3 Constraints

Stabilizing or expanding the resource base for higher education depends on four sources of support: the Government of Liberia, student tuition & fees, institutional donor support, and alumni or private sector fund raising. Each of these sources faces constraints. The Government of Liberia's ability to support higher education depends on revenues, which in turn depend on the national economy, which is not likely to experience a dramatic upturn in the short-term. It is assumed, therefore, that significant increases in Government of Liberia support will come only from an increased emphasis placed on higher education.

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Students and their families supply less than three percent of the revenue for higher education through tuition and fees. This is a small proportion, even for developing countries. Expansion of the student and family share depends on household income which, in turn, depends on the same economic conditions experienced by the Government of Liberia. The depressed state of the economy is a constraint here as well.

Increases in institutional donor support are constrained by the donors' resource base, which has not diminished markedly, and their confidence in the efficacy of their investments, which has diminished. Donor confidence is constrained by the record of the recent past, in which development efforts in the higher education have not been notably successful.

Increasing alumni and private giving to higher education may be subject to the same constraints experienced by the Government of Liberia and students. However, since so little is now done in this area, it is not clear the extent to which the current level of support from this source is constrained.

The low levels of secondary school student achievement (discussed earlier) have been attributed by many observers to low motivation. The same may account for high wastage rates in college. Low motivation sometimes is attributed to two causes: a perception of fewer opportunities in the economy, and a perception that an individual's skills and training are taking on less importance as determinants of success. Success, in this case, is thought by some to be determined more by family or

political influence than by merit. To the extent that this perception is widely held, it could seriously affect motivation and achievement. Unfortunately there is no systematic data to confirm or refute this claim.

Improvements in management and planning discussed above depend on an organizational infrastructure just as a useful campus depends on the physical infrastructure. The organizational components needed are norms of rational decisionmaking, value placed on expertise and competence in technical matters, a clear system of authority and role definition, universalistic rules, effective incentives for management abilities, and consistent professional ethics. The degree to which these are lacking will constrain management developments, even if financial and other resources are available.

8.2.4 Issues

8.2.4.1 External Efficiency

The efficiency of student flow from secondary to higher education is reflected in the degree to which the preparation of the students fits or matches the requirements of the colleges, and how well the college offerings match the needs of the students. The achievement level of entering students should be consistent with the requirements necessary to begin and progress satisfactorily through their college program. This fit can be

assessed by the performance of students on entrance exams and their success in their subsequent study.

The evidence strongly suggests a poor fit between preparation and requirements. The pass rates on entrance examinations are low and have been falling over the past three years. Fewer than ten percent of the University of Liberia applicants pass both sections of the entrance exam. The percent the Cuttington University College entrance examination is even smaller. The University of Liberia admits nearly 1,000 students per year who must take high school level courses (noncredit) before beginning their degree work. Many of these students never graduate. Wastage rates, the proportion of admitted students who fail to graduate, are high for University of Liberia, exceeding 60 percent in some cases. The rates are much smaller for Cuttington University College and WVSTCT since they admit fewer underqualified students.

8.2.4.2 Internal Efficiency

The poor academic preparation of entering students suggested by the current pattern of entrance test results has consequences for how quickly and successfully students pursue degrees. Many students take more than four years to complete a degree and attrition rates have been high. Both indicators suggest low internal efficiency.

Another aspect of internal efficiency is reflected in student:faculty ratios. In this respect, there are several programs at University of Liberia and Cuttington University

College which appear inefficient. The estimated students:faculty ratios are shown in Table 8.5. Some of the faculty are part-time, so the ratios may be larger if full-time equivalent counts are used. But even with this adjustment, the ratios at the undergraduate level are small in all fields except business and science. Since, many of the UL students are in precollege courses, the student:faculty ratio for bachelors level students is even smaller.

These low ratios may reflect high quality instruction. Since the institutions have weak mechanisms for assessing academic quality, this must remain conjecture. It is reported that many graduates of University of Liberia and Cuttington University College continue graduate study abroad. The success of these students in external institutions would be evidence of quality of instruction. But as yet, no systematic data on this is available. A Cuttington University College survey of graduates has shown that a high proportion of them have achieved success in academic and other fields. This can be interpreted as evidence of instructional quality.

8.2.4.3 Access and Equity

Open access to higher education results in a distribution of students similar in personal characteristics to the distribution of those characteristics in the population. For example, in an institution with open access, the proportion of female enrollment should be about the same as the proportion of females in the

Table 8.5

Student:Faculty Ratios by Institution and Program

	University of Liberia	Cuttington College	WVSTCT
Humanities		3:1	
Social Science		37:1	
Science	27:1	13:1	
Business	59:1	59:1	
Agriculture	7:1	93:1	
Education	8:1	15:1	
Medicine	2:1		
Nursing		15:1	
Law	12:1		
Library	6:1		
Theology		3:1	
Architecture			4:1
Civil Engineering			6:1
Electrical Engineering			8:1
Electronics			8:1
Mechanical Engineering			8:1

population. The groups or divisions relevant to the question of access are male/female, region or county of origin, and ethnicity. There are 13 counties in Liberia and approximately 17 ethnic groups. In a fully open system, all of these characteristics should be represented in proportion to their representation in the population. Since there are no accurate population statistics, especially for ethnic and county identification, an accurate assessment is not possible. It is possible, however, to assess access by comparing enrollments by group and county of origin. Gender comparisons show the current enrollments in higher education are nearly 80 percent male at University of Liberia, 62 percent male at Cuttington University College, and 96 percent male at WVSTCT.

The somewhat lower representation of women is probably a reflection in lower attendance and pass rates for the examination rather than gender discrimination in admissions. The data on county of origin in Table 8.6 show that there appears to be reasonable access from the interior of the country as well.

8.2.4.4 Administration and Supervision

The basic structure and expressed goals of administration are conducive to effective management in these institutions. However there are several problems and gaps in resources and organizational infrastructure which interfere with the ability of the administrative staff to manage at full effectiveness. These are lack of detailed and systematically collected data about operations, lack of technically trained support staff and

Table 8.6

Enrollments in Liberian Higher Education
by County or Country of Origin and Gender

County	University of Liberia male	University of Liberia female	Cuttington College male	Cuttington College female	WVSTCT male	WVSTCT female
Bomi	78	14				
Bong	227	41				
Gr. Bassa	243	92				
Cape Mnt	165	56				
Gr. Gedeh	194	29	a		a	
Gr. Kru	234	57				
Lofa	741	96				
Mara-Gibi	51	17				
Maryland	205	90				
Montser.	312	177				
Non-Liberian	84	39				
Total	3223	850	544	350	135	5
Percent	79%	21%	62%	38%	96%	4%

a - Data on county of origin were not available for CUC and WVSTCT.

computational equipment, and lack of supervisory and incentive systems for management. There is also a general lack of integration between what are often carefully prepared long-range plans and the details of day-to-day operations. Implementation is therefore often the weakest stage of any project or development activity.

The shortage of information about operations is both a symptom and cause of difficulty. A fully developed management structure would require such information. It would include regular cost accounting and financial controls at the unit level, regular evaluation of instruction, analyses of enrollment, student flow, and output, and apparatus for regular communication among administrative and instructional staff. The absence of such information prevents effective control and evaluation of operations necessary to informed decisionmaking.

Aside from the normal incentives of promotion and tenure evaluation for faculty, there is also an absence of systematic incentive systems for employees and managers. In the absence of regular mechanisms of evaluation and reward, morale suffers and compensation or promotion decisions may be based on personal or political considerations.

It is difficult to judge the degree to which these shortcomings in management are a consequence of resource shortages, lack of certain technical skills, or a more general absence of commitment to rational management models. Resource constraints are severe, and account for much of the problem, as

does the lack of particular institutional research and management design expertise. But it also appears that in some cases the commitment to objective analysis and expertise as a basis for decisionmaking is problematic. The prevention of such cases should be a major objective of management development.

8.2.4.5 Costs and Financing

Issues related to facilities and program costs must be treated separately. There are three separate elements involving facilities costs: implementation of the plan to move the University of Liberia to the Fendell campus, maintenance of basic facilities and equipment at Cuttington University College, and provision of basic facilities and utilities at WVSTCT. The costs of implementation of the full Fendell plan are outside reasonable cost constraints for the short-term. The issue therefore is to determine how much of the plan to complete. This involves decisions as to how many existing structures should be completed and how much new construction initiated. Along with the campus completion questions are those of how to renovate and maintain the facilities on the Monrovia campus.

The facilities questions at Cuttington University College and WVSTCT involve two parts: maintenance of existing structures and plans for new construction. There are no plans for new construction at WVSTCT, but the poor state of utilities and equipment and the shortage of administrative space are problems. Buildings and grounds at Cuttington University College are well maintained, so the issues are how to sustain that level in light

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of reduced revenues and evaluation of the need for new construction.

8.2.5 Conclusions

8.2.5.1 External Efficiency

The low levels of internal and external efficiency in the Liberian higher education system are closely related. Therefore they will be treated together in this section. The first set of causes arise from the problematic relationship of the higher education institutions with their political, social, and economic environment. The shift in orientation of UL toward a more open admissions policy places the University in a dilemma. If it admits only qualified students, it will drop in enrollment, causing political repercussions and reducing its resource base dramatically. If it admits the required number of students, large costs will be incurred in attempts to remediate their academic deficiencies.

Another aspect of the relationship between Liberian higher education and the larger Liberian environment is the prevailing public policy and attitudes concerning personal investment in education. Access to higher education is viewed an entitlement, to be supported by public funds, with students and households providing a small proportion of the direct costs. This is strongly reinforced by the Government of Liberia's announced policy of free education for all. The negative results of this are a strong resistance to tuition increases and an apparently

lowered sense of personal responsibility for learning on the part of students.

A positive aspect of this policy is greater equity resulting from broader access to higher education, especially by students from low income families or areas where K-12 education is weak. This is an important public policy objective and should not be abandoned. The policy problem thus becomes to find a way to preserve high levels of access to higher education opportunities, especially by the low income or educationally disadvantaged elements of the population and at the same time improve efficiencies and personal responsibility. This is a major goal of the recommendations discussed below.

Another aspect of external efficiencies is the quality of fit among the higher education institutions themselves and between the institutions and the economy. Lack of articulation among higher education institutions and lack of clear standards for course content and credit isolates the institutions. Students cannot transfer among them since there is no information base or consensus on which to evaluate the courses offered for transfer credit. Without this consensus, students may have to repeat course work unnecessarily, the institution may expend resources in fruitless review of previous work, or students may get credit erroneously--all inefficiencies. The poor fit with the economy is reflected in the low use of manpower planning projections in higher educational planning and the poor fit

between the training of graduates and the needs of the government and economy.

External efficiencies are further weakened by the lack of manpower planning data. There is no regular systematic collection and analysis of such data for the country. It is not possible, therefore, for the higher education institutions to attempt realistic planning. The capacity for such data collection is available in the AITB and the Ministry of Planning and Economic Affairs.

8.2.5.2 Internal Efficiency

Some elements of internal efficiency vary considerably from campus to campus. There is evidence of excess capacity in many of University of Liberia's degree programs, as indicated by low student:faculty ratios. This is largely a consequence of lack of qualified applicants. Output of graduates is low, which necessarily increases cycle costs. There are weak cost and quality control mechanisms leading to high expenditures on remediation and wastage. The University of Liberia is in a severely restricted financial situation with limited options for expansion or program development. It is therefore imperative to achieve the highest possible levels of internal efficiency so as to make best use of available resources.

The severe cutbacks in Government of Liberia support have produced a crisis-oriented approach to management and decisionmaking. Decisions and control have become centralized and ad hoc in nature. Under the financial stress, the

organization has shifted to a tradition-based management style in which the chief executive exercises more personal control. Such an approach may be a useful coping mechanism in the short-term. However, over the long-term, such a system overloads decisionmaking at the top and reduces morale and efficiency at the lower levels. Errors, unanticipated consequences, and loss of operational control are the most likely consequences of persistence in this mode.

There is evidence of somewhat higher internal efficiencies at Cuttington University College. There is a functional financial plan/budget for the institution and considerable delegation of authority. Present capacity use, as indicated by student:faculty ratios, is also quite low in several programs. Instead of wastage and high remediation costs due to admission of underqualified students, Cuttington University College faces drops in enrollments resulting from maintaining admission standards. This leads to lower revenues and drops in efficiency due to underutilization of existing resources. Since the College has a substantial investment in particular kinds of buildings and faculty, it is difficult to make short-term adjustments to enrollment fluctuations.

WVSTCT also has excess capacity; 140 students in a facility that can accommodate 250 and a small student:faculty ratio. The inadequate physical infrastructure seriously diminishes internal efficiency. This low internal efficiency is further exacerbated by the poor prior preparation of entering students.

8.2.5.3 Access and Equity

Student access to either the UL or Cuttington College is not limited by a student's county of origin within Liberia. There is, however, a low level of female admission and completion. This is not a matter of admission or program discrimination, it appears, but of a selection process operating at lower levels of the education system.

The drop-in and late payment of GOL financial support to students has a differential impact on lower income students, especially in Cuttington where tuition is higher. Similarly, poor prior academic preparation is related to family income and gender; females and students from low income families tend to have more difficulty meeting admissions requirements.

8.2.5.4 Administration and Supervision

The recent history of higher education in Liberia has been traumatic, especially for those in administrative and policy-making positions. There is considerable training and expertise in the administrative ranks, but the organizational resources for effective management are weak or underdeveloped. In addition, the turbulence of the external environment has put severe stress on the administrative staff. It is not surprising that under these circumstances the overall management process needs improvement.

In general, management in Liberian higher education is characterized primarily by dedicated staff working with

inadequate resources, weak provision for internal quality control, no institutional research capacity, weak teaching evaluation methods, and a lack of institutional norms and standards for good management. Staff are also hampered by lack of management technology and appropriate organizational structures.

Much of this traumatic history has created a crisis-oriented style in much of the management activity. The methods appropriate to short-term crisis management are not appropriate to long-term institutional development. While the current financial and political situation remains difficult, it must be viewed not as a crisis but as a chronic state. Therefore the crisis approach must be replaced by more orderly and systematic methods.

A new Commissions or other national-level control structures are not needed. The problems of poor management are not caused by lack of overall control. Moreover, the management capacity of the Ministry of Education or Ministry of Planning and Economic Affairs is not greatly evident. What is needed instead is a national-level body for accreditation and oversight, to promote high quality and effective management. The University of Liberia management seems to lack incentives for effective development or systematic evaluation. The WVSTCT management lacks the basic resources for management operations and needs both physical support and technical assistance.

8.2.5.5 Costs and Financing

The current methods for financing the two sectors of higher education differ significantly. CUC is largely self-supporting, depending on student fees and privately-raised finances. The promised GOL subsidies are not reliable and so are not a significant part of the college's revenue planning. The college administration has flexibility in how it uses resources especially regarding trade-offs between personnel and other expenditures. The constant pressure to raise revenues and control expenses has led to a reasonably efficient and cost-conscious administrative style.

Government policies for allocation of resources to the public institutions leads to a different situation. The UL and WVSTCT administration have an unreliable income flow from the GOL and relatively little discretion in how their GOL revenues are spent. With salaries paid directly by the GOL, the UL and WVSTCT administrations do not have sufficient discretion to reallocate among personnel and other expenditures. Also, the low tuition rates leave discretionary funds from these sources in short supply. The result is that the UL and WVSTCT administrations have little external incentive to control personnel costs. There is also little in the way of private fund raising. The arrival of a new president at UL who has previous experience at a private college should improve that situation.

8.3 Recommendations

Recommendation 1. Improve the quality and efficiency of undergraduate education by restructuring the financial rearrangements and reducing the remedial costs and wastage.

This is a multifaceted problem which requires a coordinated approach. This recommendation includes three parts. First, student financial aid should be increased to allow more students to attend full-time thereby reducing wastage due to program noncompletion. The increase in financial aid could come from a new Government of Liberia subsidized student loan program and a workstudy program. A relatively small Government of Liberia loan fund for low-interest student loans to low income families would make higher tuition affordable for many families. The increase in funds available to students would increase rate of progress through programs for many borrowers. Putting more responsibility on students and families for investment in education would also have the effect of increased student motivation to complete programs so that returns on the investment will be realized. These opportunities should be available to all higher education students who are unable to afford tuition increases. The GOL and MOE should develop guidelines for determining student financial need.

The workstudy program would provide grants for students from low income families to help cover the costs of remedial instruction. At the same time, these students would assist

college departments and offices that are short of staff or work on much-needed campus maintenance.

Second, tuition should be increased to shift more of the campus responsibility for investment in education to the student and family. Students should pay a high proportion of the cost of their education. Increased tuition would have two useful effects. It would reduce somewhat the high demand for admission and, at the same time, provide resources for financial aid for needy students, as described above. By increasing both tuition and aid, the University of Liberia can keep opportunities open for low income students and at the same time attract new resources for support and remediation services. The added costs to the Government of Liberia for loan subsidies would be a fraction of the costs of providing the increased subsidies directly. Subsidized loans and workstudy programs are proven approaches to student financing and have considerable potential in the Liberian setting.

Third, to insure that remedial programs are effective, the University of Liberia should require passage of an examination at the conclusion of remediation. At present, students only have to pass the individual remediation courses to enter the regular University admissions. Students can take the noncredit remedial work until they are able to pass the examination while proceeding with their studies in the areas were they have passed the exam.

There will be two additional positive effects of such an action. The examination requirement will communicate more

forcefully the need for achievement in the secondary schools. The students will clearly understand that their opportunities for University education will depend on their own achievement. This could result in higher motivation for some secondary school students and a correspondingly better learning climate at the secondary level.

The second effect would be less waste of time and money by students who will not finish a University degree program. It could be argued that the students who receive remedial instruction in University have received valuable educational benefits. This is undoubtedly true, but these benefits can be delivered at the secondary level at a much lower unit cost.

Recommendation 2. Postpone the completion of the move of the University of Liberia to the Fendell campus.

The completion of the Fendell campus and the move there is estimated to cost over three million dollars. This level of funding is not available, given the already austere University financial situation. Instead, the University should establish service courses on each campus in those areas of general education with the highest enrollments. This will reduce the need for high volumes of student transportation between campuses. The Liberia College and other programs now on the Monrovia campus should remain in place until the Fendell campus building and infrastructure problems are solved. Instead of high expenditures on new construction, available funds should be directed to

maintenance of current structures and facilities, which have deteriorated badly.

Recommendation 3. Increase the autonomy and accountability of Higher Education.

Create a national-level Commission on Quality of Higher Education charged with oversight and assessment, not administration. The Government of Liberia has a legitimate concern with the higher education system, due to its importance to the future of the country and the large subsidies provided. That concern should focus on the overall performance of these institutions rather than the details of the way in which they are administered. This commission should develop means of assessment and policies for accreditation of higher education, so as to insure that the institutions remain responsive to national purposes.

Recommendation 4. Improve the management of higher education.

The National Commission could serve as a support structure for higher education management and development. The Commission could provide assistance with technical skills, analytical methods, and linkages to relevant professional organizations. The Commission also could operate a higher education data collection system and clearing house. This facility could be an arm of the National Commission, in the same way that the AITB is the data collection and analysis arm of the National Council on Vocational/Technical Education. It should provide up-to-date

evaluation and accreditation information and technical assistance to the institutions for internal management development.

Recommendation 5. Develop a plan to either make WVSTCT a viable institution or phase-out its operation.

At current levels of support and enrollment the continued operation of the institution cannot be justified. The instructional resources, especially Liberian faculty, can be used at the University of Liberia. The recurrent costs of the large expatriate faculty can be eliminated. The facilities are currently inadequate and funds for their improvement are not likely to be forthcoming. Therefore a phase-out plan seems the preferable option. However, there is a substantial investment in facilities and program development already in place. This should not be wasted. The investment can be protected by incorporating the associates degree program into the current College of Engineering and Science curriculum or providing adequate facilities and logistical support to the existing college. The current partial approach risks wasting valuable resources.

Recommendation 6. Establish an accreditation system.

Initiate a joint effort with an internationally recognized accrediting organization to develop an appropriate accrediting system for Liberian higher education. The accrediting process can help improve the articulation among programs and set minimum standards for the creation of new institutions (such as junior colleges).

Recommendation 7. Develop Institutes and Centers to conduct policy research.

The institution's ability to respond to national needs is limited by the lack of organizational structures designed for this purpose. The normal academic departments are usually not well designed to do short-term policy or development related work. The Government of Liberia and donors should invest in short-term support of the creation of centers and institutes within the University of Liberia and Cuttington University College to do contract and project work for the Government of Liberia, private industry, and others working in Liberian development.

9.0 NONFORMAL EDUCATION

9.1 Status

This section examines adult basic education, with particular attention to current activities in adult literacy. The major initiatives in adult education have come from four sources: (1) the Ministry of Education through the Division of Adult Education, (2) other government ministries, which view literacy and adult education as a necessary component of their larger development programs, (3) religious organizations in conjunction with their evangelical outreach, and (4) some of the larger concessionary companies for their own workers, both to upgrade worker performance and as a fringe benefit of employment.

At the national level, the Ministry of Education is the Government of Liberia's custodian for the planning, implementation and coordination of programs for nonformal education. This responsibility includes the development and distribution of appropriate materials; selection and training of personnel; establishment of schools and/or training centers; registration and monitoring of nonformal programs provided by other organizations; identification of funding sources; and the design of projects to attract donor money.

The earliest efforts to conduct adult nonformal education in Liberia were conducted by religious organizations in conjunction with their evangelistic outreach. The Baptists, Lutherans, Methodists and Catholics planned and conducted literacy programs in English and specific indigenous languages

during training of nationals who were identified to participate in spreading each denomination's religious programs in rural Liberia.

Despite the effort of the missions, the literacy rate in 1948 was estimated at only 15 percent of the population. In response to international concern over low literacy and as a means of further unifying the nation, the Tubman Administration organized a National Legislative Committee on Reference and Council, comprised of representatives of various missions operating in the country to develop strategies designed to address the issue. A national literacy program was initiated with the help of Dr. Frank C. Laubach, a leader in the American literacy movement.

In 1950, President Tubman proclaimed a National Literacy Campaign and established the Bureau of Fundamental Education (now the Division of Adult Education) within the Ministry of Education. The government allocated $35,000 to support a national literacy program and funded a limited number of scholarships for preparation of Liberians to direct adult literacy and other adult education initiatives. The literacy program was expanded in 1955 and merged with UNESCO's Program for Primary Education and Community Development. The objectives of the literacy program were to improve health and agricultural practices, particularly in rural areas. A training program was instituted at the Fundamental Education Training Center located

in Bomi County in which literacy and community development training was incorporated in the teacher training activities.

Over the last 20 years, other government ministries also have initiated adult education programs in support of their own purposes. For example, the Ministries of Agriculture and Health initiated nonformal outreach efforts to promote better individual and community practices in those areas. Since 1986, both Ministries have made extensive use of the broadcast facilities of LRCN to deliver short programs on community development, health, nutrition, and agricultural practices. In addition, they have used LRCN to promote their other programs, often with considerable success. The use of radio to promote the national vaccination campaign in 1986 resulted in a tripling of the number of children vaccinated in that year.

In 1977, the National Adult Education Association of Liberia was established. After a period of dormancy, the Association was reorganized in 1982. It collaborates with the MOE in sponsoring adult education programs, as discussed later.

9.1.1 National Goals and Strategies

Since 1948, increasing the rate of adult literacy has been cited frequently as a national goal. Efforts to address this goal have included a national literacy campaign in the 1950s, formation of a Bureau within the Ministry of Education to plan and coordinate programs in this area, and cooperation with international organizations (UNESCO) working to improve adult literacy.

The National Education Plan, 1978-1990 cites the expansion of basic, nonformal educational opportunities as one of four national priorities in educational development. Similarly, the Four Year National Socio-Economic Development Plan, 1981-1985 reaffirms the importance of adult education in national development. However, neither document provides specific strategies for achieving these goals.

9.1.2 Structure

The Division of Adult Education (DAE) of the Ministry of Education is responsible for all aspects of adult education. DAE is charged to develop adult education and adult literacy (AE/AL) programs and instructional materials, and to coordinate and monitor all AE/AL program regardless of their funding and administration. In practice, however, efforts to coordinate activities between DAE, other Ministries, nongovernment agencies and religious organizations have been few. There is currently little communication between other AE/AL program sponsors and the Division of Adult Education.

9.1.3 Program

Adult education and adult literacy are targeted toward potential learners aged 15 and above. Three categories of programs exist: (1) programs which are concerned basically with a combination of subject areas (e.g., literacy, agriculture, community health, skills development, etc.), often sponsored by GOL agencies and religious organizations, (2) programs that

concentrate on adult literacy, and (3) programs that prepare adult education trainers, often sponsored by religious institutions.

9.1.3.1 MOE Adult Literacy Programs

The instructional content of Ministry of Education adult literacy programs is comprised of basic literacy (reading, writing, and numeracy) and some community development (nutrition, health care and food preparation). These two components of DAE programs, however, are not integrated. Since the formation of DAE in the mid-1970s, they have been presented separately and often in different centers or schools. Many of the community development programs now are offered in the formal system (in the primary and secondary schools) and are not addressed in this chapter.

Adult education centers are operated on the same schedule as the public schools. The frequency of classes varies dramatically, some meet for extended periods each day, others meet three or four times a week, while some classes convene weekly. These meeting schedules may reflect the teachers' or trainers' available time slots, as many are also primary school teachers. DAE reports that some AE centers operate on a staggered basis in order that the few staff they have can be fully utilized and that training opportunities can be extended to a more diverse group of potential students.

DAE data from 1987 indicates that there were 207 adult education centers operating. All counties had adult education centers with the exception of Rivercress. These centers are supported by 13 county supervisory and administrative personnel and 309 teachers (Table 9.1).

9.1.3.2 Programs Operated by Agencies Other Than the MOE

While the following list of programs is not comprehensive, these programs represent the largest efforts in nonformal education and serve to illustrate the types of activities currently underway.

Ministry of Agriculture (MOA)

The Extension Division of the MOA administers two programs with AE/AL components: home economics/community development (primary health care and family planning) and agricultural extension. The MOA Division of Training reports 500 employees at the regional, district and county levels, whose responsibility it is to reach farmers and rural families and counsel on program concerns. MOA also utilizes LRCN and sponsors programming which addresses community development, farming, and basic health concerns.

Ministry of Rural Development (MRD)

Limited nonformal training is provided in agricultural extension activities, preventive maintenance and simple machine technologies, water supply and sanitation. Interviews with MRD staff revealed that MRD's agricultural extension programs do not

Table 9.1

Adult Education Statistics - 1987

County	Staff(a) Admin./ Supervisory	Principal/ Teachers	Support	Annual Salaries	(b) Enrollment M	F	Total	(b) Number of Centers
Bomi	1	10	-	8,496	52	147	199	6
Bong	2	34	-	38,160	175	146	321	31
Grand Bassa	1	27	-	28,416	150	148	298	26
Grand Cape Mt.	1	20	-	24,300	120	53	173	15
Grand Gedeh	1	27	-	25,824	68	199	267	13
Grand Kru	-	2		-	13	10	23	2
Lofa	2	43	-	43,320	301	137	438	43
Margibi	-	6	2	5,400	-	-	-	4
Maryland	1	9	-	12,888	41	60	101	9
Montserrado*	4	88	4	139,224	1,001	523	1,524	15
Nimba	1	24	2	32,400	165	203	368	21
Rivercess	-	-	-	-	-	-	-	-
Sinoe	1	26	-	28,140	120	130	250	22
Total	15	316	8	386,568	2,206	1,756	3,962	207

* Monserrado County statistics includes Monrovia.

Notes: a/ Taken from 1987 Payroll, Office of Controller, MOE
b/ Supplied by Office of Director, Adult Education Center MOE, 1987

Source: MOE, Monrovia, 1987.

have explicit links to those provided through MOA, except when both Ministers use the same external consultants.

Ministry of Health and Social Welfare (MOH)

Nonformal health education is the responsibility of the Bureau of Preventive services. Formed in 1986 but not yet functional, the Division of Information, Education and Communication is responsible for all MOH training programs. However, specialized programs (e.g., Combating Childhood Communicable Diseases--CCCD), that are most often externally funded, conduct their own training. The Division of Inservice Training and the Health Education Division at MOH produce adult education visual aids and training materials and conduct community health programs. Statistics on the frequency of MOH training programs were unavailable. The Health Education Division also produces biweekly LRCN and television programs.

Family Planning Association of Liberia (FPAL)

FPAL provides nonformal counseling and instructional services in family planning, family health and nutrition. FPAL currently operates 55 clinics and health centers. An annual budget of $225,000 was reported, of which 99 percent ($222,500) was provided by the International Planned Parenthood Association. GOL's contribution amounted to a cash subsidy of $1,739 and rental of office space.

Catholic Programs

Although 16 programs were reported to be operational under the auspices of the Catholic Diocese of Monrovia, information was only available on eleven, as presented in Figure 9.1.

Adult Education/Adult Literacy Training of Trainers

An addition to sponsoring formal home economics programs, the Gbanga Methodist Theological Seminary conducts one-month training sessions for up to 1,120 village pastors in the areas of leadership development and adult literacy. Literacy training is also provided to the pastors in four indigenous languages. The literacy training is now in its fifteenth year. The seminary also conducts a three-year home economics/community development program for female pastors and wives of pastors in training. Once trained, graduates are expected to form adult learning groups in their assigned ministries. No data was available as to the progress or success of these groups.

The United Methodist Church in Monrovia conducts a one-year adult education program in sewing, crafts and cooking. Fees are $5.00 for registration and $37.50 per course per semester for supplies. At present, there are eight staff and 25 students.

Baptist Seminary

The Baptist Seminary located in Monrovia offers courses for seminarians in conducting adult literacy classes. The organization operates a bookstore that specializes in adult education and adult literacy materials.

Figure 9.1

Adult Education Programs Operated by the Catholic Diocese of Monrovia

Location	Program Content	Enrollment
Monrovia West Point	Home Economics/ Personal Development	200
West Point	Adult Literacy	50
West Point	Primary Health/Literacy	NA
West Point	Carpentry/Literacy	16
Clay Harbel	not available	NA
Gbarnga	Literacy/Home Economics	12
Sauniquellie	Home Economics	NA
Sauniquellie	Home Economics	30
Sauniquellie	Agriculture	NA
Kahuple	Home Economics/ Community Development	NA
Buchanan	not available	NA

Source: Catholic Diocese of Monrovia, 1988.

Lutheran Church

Lutheran church projects include the training of village pastors to organize cooperatives to market crafts. Emphasis is placed on how trainees can transfer their skills to others in their village.

National Association for Adult Education (NAEA)

Although nongovernmental, the NAEA is closely affiliated with DAE. NAEA currently operates two training centers for adults, on in Monrovia, with an enrollment of 250, the other in New Georgia, with an enrollment of 67. Program content at the centers includes adult literacy and elements from the primary and secondary school curriculum.

9.1.4 Students

Current enrollment in DAE adult education centers is estimated at 3,763 (Table 9.1). This figure represents a 16 percent decrease since 1982, when enrollment was 4,461. Although programs are intended for students 15 and above, indications are that a sizable minority of the enrollment are recent primary and secondary dropouts.

MOE statistics reveal that 331 persons are engaged in adult education and adult literacy teaching (Table 9.1). Of these, 309 are teachers or teaching principals. This figure represents an increase of four percent over the period between 1984 and 1987. The qualifications of DAE teachers range from noncertified high school graduates to "C" certificate teachers, with a small

percentage of "B" certificate and degree holders. Less than half of the MOE employed AE/AL teachers have received any training either in adult instruction techniques or teaching of literacy. Many teachers are also employed as primary or secondary school teachers, and are involved in adult education/adult literacy as a means of supplementing their income.

There is at present no MOE sponsored training for adult education or adult literacy teachers. None of the higher education institutions offer courses or certification in adult education, literacy or nonformal education.

9.1.5 Facilities and Equipment

Facilities utilized for nonformal classes range from one room in a private house to several rooms in an existing school building to structures specifically constructed for adult education. There is no provision by MOE for operating costs and most centers have few instructional materials and most have no supplies, other than those supplied by the students.

9.1.6 Costs and Donor Assistance

Figures for total GOL expenditures on adult education and adult literacy programs are unavailable. Salaries for central Ministry and MOE field personnel and a small gasoline allowance usually represent the government contribution. Of that total, the amount provided by the Ministry of Education for adult education and adult literacy total was $386,568 in 1986 (Table 9.1).

Much of the donor funding for nonformal education has come from UNICEF, UNDP, UNESCO, and the World Bank. Efforts to expand existing adult literacy programs were undertaken between 1971 and 1974 by UNDP and UNICEF with the establishment of 24 village evening literacy centers. To expand these efforts, an adult literacy component was included as part of the community schools component of the Second World Bank Education Project. The major stated goal of the program was to make the adults more receptive to the educational efforts of other Ministries, such as Agriculture, Health, and Community Development (Snyder and Nagel, 1986).

The adult literacy program was to be conducted in community schools (constructed under World Bank funding). Each program was to receive a trained adult education supervisor, transport, and audiovisual equipment. In addition, the adult education program was to receive two person-years of technical assistance ($96,000), 8.3 person-years of training ($60,000), and vehicles and other equipment (totaling $220,000). The Bank project completion report found that the development and production of instructional materials was less than had been anticipated, that only a few of the 43 new and existing community schools were used for literacy classes, and that enrollments tended to be low (4,500 nationwide in 1982) (Snyder and Nagel, 1986).

DAE maintains a relationship with the UNESCO supported regional organization, Bureau Regional d'Education pour l'Africa (BREDA). With funding from that agency, DAE held a national

seminar in August 1987, with the purpose of producing didactic materials to be utilized in AE/AL programs. As of yet, no materials have been produced. In addition, $8,000 was received from UNICEF in 1987, for an MOE project to assist in the completion of NAEA headquarters and a Training Center for Women in Monrovia.

The Combating Communicable Childhood Diseases (CCCD) Project was funded by USAID for $655,000 and through the PL480 program for $65,000 during 1987. The program has a nonformal education component, some of which is broadcast through LRCN. CCCD reaches seven of the 13 counties.

9.1.7 Quality of Instruction

The closing of the Fundamental Education Training Center in the mid-1970s reduced the Ministry of Education's capacity to train adult education/adult literacy supervisors and teachers, develop materials and broaden content areas of adult education programs. Since that time, there has been no systematic training of adult education or adult literacy teachers.

Due to the systemwide absence of data and lack of communication between AE/AL components, a systematic analysis of program content cannot be developed. However, reports from DAE indicate that the quality of instruction at many adult education centers is low due to the limited availability of instructional materials and to teachers who lack training in teaching of adults. Many teachers appear to view adult education more as a source of supplemental income than as a major educational thrust.

Efforts to address these concerns would involve a commitment to the provision of adult education training in either a college or inservice program. The provision of a substantial supply of instructional materials that are appropriate to both literacy education and community development. Of major importance, at this time is for GOL to determine if an adult education program is viable under the present financial constraints facing government.

9.2 Analysis

9.2.1 Needs

The major needs in nonformal education are for more information about the needs, interests and abilities of potential clients which could help in designing and marketing nonformal education opportunities, training for instructors in techniques of adult education, and increased linkage among existing programs.

9.2.2 Plans

At present, GOL has no plan to further expand delivery of adult education/adult literacy services. However, DAE anticipates the MOE will address the need for expanded adult education and adult literacy services in the next National Education Plan.

9.2.3 Constraints

There are four major constraints which impact on nonformal education: the financial condition of government, the limited information about potential target population for adult education, the low level of training of some of the instructional personnel, and the lack of coordination of activities across the subsector.

9.2.4 Issues

9.2.4.1 External Efficiency

While adult basic education has been cited as a national priority since the late 1940s, three factors have converged in the last five years that accentuate its importance to national development. First, participation of children in formal schooling has dropped, even as the population is growing by an estimated 3.3 percent annually. The participation rate of school-aged children in first grade has dropped from an estimated 52 percent in 1984 to an estimated 34 percent in 1987. Consequently, more children will move into adulthood without the benefits of formal schooling. Secondly, many students will drop out of school before completing secondary school. Of the 34 students who do start first grade, only two complete secondary education and receive a diploma in twelve years. Some evidence suggests that many drop out before basic skills are mastered (see Chapter 4.0). Third, in response to the economic pressures on government since 1984, GOL has initiated a civil service reform

which will result in a slowing of public sector employment opportunities and a possible reduction in the current size of the civil service. To the extent these changes occur, they might contribute to increased competition for employment in the private sector. If this occurs, applicants with basic literacy skills would have an advantage.

While the importance of nonformal education may be increasing, the literacy rate appears to be stable. In 1948, the adult literacy rate was estimated at 15 percent. In 1976, a World Bank appraisal reported 85 percent of women and 60 percent of men aged 15 and above were illiterate. The 1984 Education and Training Sector Assessment reported a 25 percent literacy rate nationally. However, there are substantial differences across counties; literacy rates range from 40 percent in Montseraddo County, the major urban area, to 11 percent in rural Lofa County. There is no evidence of an increase in literacy over the last five years.

9.2.4.2 Internal Efficiency

Given the limitation on MOE funding, it is of special importance that DAE expenditures be targeted well. For that to happen, clear and current information about the target population for nonformal educational programs is necessary. At present, little is known about client needs, intentions, and interests, or abilities of target groups to respond to the various methods of presenting AE/AL materials. One contribution to internal efficiency would be a series of small needs assessments in

selected geographical areas to help identify potential client needs. LRCN could be used to help alert community members of the opportunity to have input to the study.

9.2.4.3 Administration and Supervision

The Division of Adult Education is constrained by the absence of a clearly defined national policy, the limited amount of resources and personnel that can be provided by GOL, and the concentration of adult education in urban areas (Nuhann, 1984; Bull, 1984; Snyder and Nagel, 1986). In addition, adult education activities have been poorly publicized, a situation that may change with increased use of LRCN.

At present, nonformal education activities under the sponsorship of missions and private companies continue as time and resources of the sponsoring groups permit. No effort is made to document the amount of nonformal training that occurs and no meaningful effort is undertaken to coordinate or regulate these activities. The government's efforts in nonformal education have been constrained seriously by a lack of operating budgets across many ministries and agencies. However, the recent completion of the Liberian Rural Communications Network (LRCN) has opened a new avenue to reach communities with nonformal educational programming. At present LRCN reaches about 58 percent of the rural population. Nonformal educational programming has been mainly in the areas of health and agriculture. To date, the Division of Adult Education in the Ministry of Education has made

only minimal use of LRCN, largely due to lack of funds to purchase broadcast time.

9.2.4.4 Cost and Financing

GOL currently is able to contribute little more than employees' salaries to its nonformal education efforts, a situation that is expected to continue. Special emphasis, then, should be placed on encouraging and extending nonformal education opportunities in ways that do not draw on public funds. One way this can be done is to help ensure that public policies are not implemented that restrict or inhibit private sector involvement in nonformal education.

Government sponsored adult education programs outside of the Ministry of Education suffer from the same budgetary constraints as those directly controlled by DAE. The absence of government provided operating funds affects all of the programs. Until the national economy improves, it is unlikely that adult education and adult literacy programs will be able to expand, except where donor funds are available, as in the case of CCCD.

9.3 Conclusions

Conclusion 1. The Ministry of Education and other agencies engaged in nonformal education activities need to work together to publicize the nonformal opportunities available to adults.

Conclusion 2. More training should be available to adult education/adult literacy instructors on techniques of teaching adults.

Conclusion 3. Increased attention should be given to the development and distribution of instructional material appropriate for use with adults. One strategy is for DAE to encourage sharing of materials across public and private agencies involved in adult education.

9.4 Recommendations

Recommendation 1. The Ministry of Education should develop a national plan for adult education.

This plan should identify MOE priorities for the continued development of nonformal education. The plan should be designed to serve as a guide to MOE resource allocation and to assist the Ministry in approaching donors working in the area of nonformal education.

Recommendation 2. The MOE should sponsor a series of needs assessments in selected geographical areas to identify community interest and demand for nonformal education.

These studies could be conducted in both urban and rural areas with the purpose of collecting information that would help DAE better target its instructor selection and training and its publicity efforts.

Recommendation 3. The MOE should provide leadership in developing a voluntary instructional materials exchange among public and private groups involved in adult education and adult literacy programs.

This exchange could help keep costs of materials development low by encouraging the use of existing material found to be effective.

Recommendation 4. The MOE should continue to expand its use of LRCN to provide nonformal education to adults in rural areas.

The success already experienced by the MOE and by other Ministries suggests that LRCN is a powerful tool for reaching rural communities with nonformal education.

10.0 BIBLIOGRAPHY

LIBERIA EDUCATION AND HUMAN RESOURCES SECTOR ASSESSMENT

Agricultural and Industrial Training Bureau. Selected Industries Training Needs: Survey Report. Monrovia: National Council for Vocational/Technical Education and Training, January 1986.

Agricultural and Industrial Training Bureau. Report of the Tracer Study of Industrial Supervisory Training Program Participants 1981-1983. Monrovia: National Council for Vocational/Technical Education and Training, January 1986.

Agricultural and Industrial Training Bureau. "Technical and Administrative Report Covering the Period December 6, 1984 to August 31, 1985." Monrovia: National Council for Vocational/Technical Education and Training, October 1985.

Agricultural and Industrial Training Bureau. "Technical and Administrative Report Covering the Period December 22, 1983 to June 19, 1984." Monrovia: National Council for Vocational/Technical Education and Training, June 1984.

Agricultural and Industrial Training Bureau. The Administrative Handbook of the National Council for Vocational/Technical Education and Training and its Administrative Secretariat. Monrovia: National Council for Vocational/Technical Education and Training, September 1985.

Agricultural and Industrial Training Bureau. "The Administrative Regulations of the National Trade Test and Certification." (Draft) Monrovia: National Council for Vocational/Technical Education, February 1987.

Agricultural and Industrial Training Bureau. National Survey of Vocational and Technical Education and Training Institutions in Liberia. Monrovia: National Council for Vocational/Technical Education, 1982.

Agricultural and Industrial Training Bureau. "Technical Regulations of the National Trade Test at the Basic Level." Monrovia: National Council for Vocational/Technical Education, March 1987.

Agricultural and Industrial Training Bureau. "Technical and Administrative Secretariat Report Covering the Period January 9, 1987 to August 26, 1987." Monrovia: National Council for Vocational/Technical Education, 1987.

Azango, Bertha B. Decentralization and Educational Efficiency in Liberia: The MCSS Experience. Monrovia: The Institute of Research, University of Liberia, 1987.

Bureau of Teacher Education and Accreditation. Teacher Education: Summary of Policies Regarding In-Service and Pre-Service Programs. Monrovia: Ministry of Education, undated.

Chapman, David W. and Windham, Douglas M. The Evaluation of Efficiency in Educational Development Activities. Albany, N.Y.: IEES Project, 1986.

Cuttington University College. Personnel Policy Handbook. Bong County: CUC, 1986.

Cuttington University College. 1986-1987 Catalog. Bong County: CUC, 1986.

Department of Planning and Development. "Education in Liberia." Monrovia, Ministry of Education, 1979.

Government of Liberia. The Budget of the Government of Liberia for Fiscal Year 1986-1987. Monrovia: Government of Liberia, 1986.

Institute of Public Administration. "Annual Report to the President of the Republic of Liberia and the Board of Directors: January 1, 1984 to December 31, 1984." Monrovia: IPA, 1984.

Institute of Public Administration. "Annual Report to the President of the Republic of Liberia and the Board of Directors: January 1, 1985 to December 31, 1985." Monrovia: IPA, 1985.

Institute of Public Administration. "Annual Report to the President of the Republic of Liberia and the Board of Directors: January 1 to September 30, 1986." Monrovia: IPA, 1986.

Kialain, David et al. "Vocational Technical Education and Training in Liberia." Paper prepared for the National Policy Conference on Education and Training in Liberia: Towards the 21st Century, Cuttington University College, July/August 1984.

Ministry of Agriculture. Annual Report: January 1987-December 31, 1987. Monrovia: Ministry of Agriculture, 1988.

Ministry of Agriculture, Bureau of Training. "Draft Proposal for Reorganizing the Training Department." Monrovia Ministry of Agriculture, 1987.

Ministry of Education. National Education Survey: 1984. Monrovia Ministry of Education, 1985.

Ministry of Education. Procedures for Evaluation and Certification (for Rural Teacher Training and In-Service Training Programs). Monrovia: Ministry of Education, 1980.

Ministry of Education. Handbook of Policies and Procedures for Certification of Educational Personnel in the Republic of Liberia. Monrovia: Ministry of Education, March 1982.

Ministry of Education. School Directory. Monrovia: Ministry of Education, 1984.

Ministry of Education. Ministry of Education Budget: 1984-1985. Monrovia: Ministry of Education, 1984.

Ministry of Health and Social Welfare. Annual Report: October 1, 1986-December 31, 1987. Monrovia: Ministry of Health and Social Welfare, 1988.

Ministry of Rural Development. Annual Report: January 1, 1987-December 31, 1987. Monrovia: Ministry of Rural Development, 1988.

Ministry of Youth and Sports. "Annual Report to the National Legislature: January 1, 1987-December 31, 1989." Monrovia: Ministry of Youth and Sports, 1987.

Modu, Christopher. "Specialist Services and Fellowships for Staff Development: Annual Technical Report." Monrovia: Institute for International Research, 1986.

People's Redemption Council. "Decree by the People's Redemption Council of the Armed Forces of the Republic of Liberia Amending the Executive Law to Provide For, Chapter 86, to Establish a National Council for Vocational/Technical Education and Training." Decree No. 56 Monrovia: Government of Liberia, October 30, 1981.

Snyder, Conrad W. and Nagel, Joane. The Struggle Continues: World Bank and African Development Bank Investments in Liberian Educational Development (1972-1985). Monrovia: Ministry of Education, 1985.

Teacher Incentives Policy Research Initiative Project. "Status Review of Incentives for Teaching in Liberia." Unpublished draft, 1987.

University of Liberia. Manual of Rules and Regulations For Non-Academic Personnel. Monrovia: University of Liberia, 1984.

University of Liberia. "Towards the 21st Century: An Extension of The University of Liberia's Long Range Plan." Monrovia: University of Liberia, 1984.

Weraer, Kiwitt. "Report on the Nimba Agricultural Education Program 1985-1987 and Proposals for Countrywide Implementation." Monrovia: Ministry of Education, 1987.

W.V.S. Tubman Teacher College. A Curriculum Guide for In-Service Training Programs Leading to a Grade "C" Teaching Certificate for High School Graduates Teaching in Elementary Schools. Monrovia: University of Liberia, 1982.

W.V.S. Tubman Teacher College. "Report on the In-Service Teacher Training Program: Phase I and II (Vacation School)." Monrovia: University of Liberia, 1985, 1986.

Windham, Douglas M. Indicators of Educational Effectiveness and Efficiency. (Draft). Albany, N.Y.: IEES Project, 1987.

World Bank. World Development Report: 1987. Washington, D.C.: World Bank, 1987.

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